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IN

EUROPE AND AMERICA.

With Twenty-Five Tables

OF RECENT AND NOVEL

STATISTICS OF JOURNEYS, SPEEDS, FARES, ETC.,

FOR TRAVELLERS AND OTHERS.

BY

ROBERT S. MINOT.

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1882.

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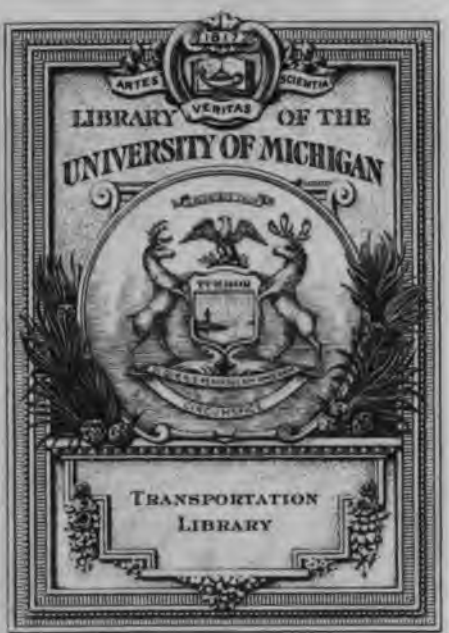
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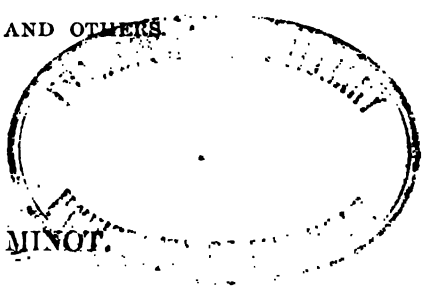

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PREFACE.

THE following article and tables on railway passenger speeds and fares in Europe and America have been prepared for the information of travellers, and in the spirit of suggestion to thinking men. Very little knowledge is current on this subject, and the ideas one meets in conversation and in the newspapers show, not a deficiency of knowledge merely, but a superfluity of false and wild notions, and beliefs in things which are not so. Faith in the civilizing influence, the mission of railroad travel, I might say, has led me to think the subject of general and practical importance and interest. I have therefore prepared with considerable labor some figures as a basis of actual knowledge of the progress and present status of so important a branch of railroad economy and of civilization.

Travellers will find in them, it is hoped, compact information of practical value, for those who wish to learn beforehand the length and cost of all important journeys in Europe and America, or who, having made such journeys, wish to refresh their memories or inform their friends.

I have to thank Mr. H. V. Poor, and also the Hon. Thomas Russell, of the Massachusetts Railroad Commission, for their kind interest and attention given to this article. I am also obliged to numberless American ticket-agents for their uniformly prompt, courteous, and complete answers to inquiries about fares.

R. S. M.

39 COURT ST.
BOSTON, June 1, 1882.

RAILWAY SPEEDS AND FARES

IN

EUROPE AND THE UNITED STATES.

INTRODUCTORY. — The progress of civilization is more or less coextensive with the progress of means of communication and transportation. But a short time ago, neither steam transportation nor telegraph existed; the world contained vast unexplored tracts, — regions of mystery, whence solitary travellers delighted to bring back marvellous tales; the nations dwelt in greater isolation than now; and our planet, with its multitudinous and varied populations, seemed vast and all-important. The globe, to our forefathers' eyes, possessed only *physical* unity. Two generations ago, nobody dreamed of the marvellous changes so soon to come by man's sudden acquisition of new power over things. But in this brief interval, the locomotive and the steamboat, and through them the mails, have created commercial and other ties between us and our antipodes as close as those formerly existing between neighboring towns. Their tracks have been stretched over the face of the earth like huge elastic bands, in a sense compressing its volume ten times, and forcing its peoples into closer relations; while the electric telegraph has, as it were, shrivelled up the vast globe to the size of a pea!

The steamboat has worked on a vaster scale than the loco-

motive, because its watery track has been laid for ages in nearly every desired direction; but in Europe and America, although *not one* great inter-continental railway has yet been built or seriously projected to my knowledge, still the locomotive has borne the chief burden of the world's commerce. A map of the railway systems of these two continents can hardly be seen, or certainly not attentively examined, without feelings of amazement. Where those black lines form the closest mesh, there the world's civilization has culminated. In Europe, one can note at a glance how "westward the course of empire has taken its way." In the extreme east, the black lines are most straggling, indicating the very confines of European civilization; and so in the extreme south and north. But as we reach Germany, Austria, and Upper Italy, the lines at once multiply, and an approach to a nucleus or centre is perceived, whose position is more and more accurately indicated as we proceed to France, Holland, and Belgium; and finally it is reached by crossing the Channel to great London, *the* centre of commerce and perhaps of civilization. So in America, the lines on Rand and McNally's railroad map show by radiation exactly where our great centres are, where civilization is oldest, where it has as yet scarce reached, and where the curse of slavery retarded it. Were all history and tradition utterly lost a thousand years hence, except one railway map of the world to-day, posterity could at once point its finger accurately at the great hives of human industry, and judge with great exactness the location and limits of the world's progress and general civilization. Were all the steamboat lines, post routes, telegraph lines, and cables added, they would scarce need to be told where were the most churches, colleges and schools, museums and theatres, factories and costly dwellings, — whence came the great bodies of great preachers, scientists, statesmen, artists, mechanics, and laborers. It would all be most clearly writ-

ten down in those lines, which form the great chart of the power of mankind in this wonderful century. The statistics of the world's communications and transportations cannot fail to give us a better knowledge of ourselves, and of our position in civilization; for, whether regarded as causes or effects (and they are doubtless both), they seem to be, at any rate, a fair gauge of all progress.

Of course a complete study would be the work of many years at least; but I think it possible to present a rough sketch, or rather an instantaneous photograph as it were, of the present railway development, from a point of view which will be interesting and suggestive of further study. The results of a careful and laborious examination of the passenger travel in Europe and America are therefore presented here, compiled in tables setting forth the amount of travel, the speeds and charges between important points in the various countries and States, and comparing the two continents in these respects. Though the omission of a comparison of freight traffic is unfavorable, and may seem unjust to the general efficiency of American railroads, yet it seemed more judicious to select railway passenger traffic, because statistics were more readily accessible in tolerably reliable railway guide-books.

Travel is a sort of education, furnishing us with intellectual nutriment, as well as attrition with a great variety of minds. Hence those who are eager for self-improvement and race-improvement must desire that railroads and steamboats should be brought to perfection, that we shall be able to travel more swiftly, safely, comfortably, and cheaply; that, for example, we may come to cross the Atlantic in less than a week for one half the present fare; that for fifty dollars we may reach San Francisco in three days from New York in palace cars, with meals included; and go round the world in a month or six weeks for some low rate, all of which *desi-*

derata seem not unlikely to be realized ere the close of this century.

SAFETY. — Before presenting my tables it may not be amiss to sketch the comparative conveniences and comforts of railway travel on the two continents, as, at the present stage of human science, can hardly be done in figures. As to safety, it has been proved that the average traveller can travel many million miles on land or sea in absolute safety for life and limb. One can scarcely be safer than in a railroad car or on a steamboat. From the Massachusetts railroad commissioner's report (for 1878, I believe), I deduced this conclusion, that in this State a new-born babe must travel incessantly at forty miles an hour for about a century, in order to run the *average* risk of being *killed* by a railroad accident, and for about twenty-five years in order to receive any injury whatever. Few of us have the time to get hurt even.

COMPARATIVE CONVENIENCES AND COMFORTS OF THE EUROPEAN AND AMERICAN SYSTEMS. — It is generally well known in America that the English or Continental system of railway travel differs from our system chiefly in the classification of accommodations and corresponding charges, and in the plan and construction of the carriages or cars. From London to Rome or St. Petersburg the Old World system is in vogue almost or entirely without exception. From New York to San Francisco or New Orleans the New World system is equally in vogue. Each has its peculiar advantages and defects, and it is an interesting question whether one is destined finally to prevail over the other, and if so, which; or whether some combination of the two, superior to both, will be evolved gradually, and survive as the fittest. One can hardly suppose that two such defective systems can grow up side by side indefinitely, in this age of universal progress, without mutual influence

and modification. Since we Americans (of the United States at least) travel in Europe far more than Europeans travel or are likely to travel in the States, and as we are also perhaps in practical matters the most observant, inventive, progressive, and least prejudiced of nations, it is to be hoped that we shall be the first to analyze both systems, and by selecting and combining their respective merits, to found a new and universal system of railway travel.

The writer speaks as a mere traveller who has tried both systems pretty thoroughly, and who approves entirely of neither. He desires here merely to discuss and compare the two systems, and to suggest some improvements in our own.

The Start. — When the American traveller goes to the Grand Central Depot in New York, he has probably secured his ticket beforehand, as he can very rarely do in Europe; he drives to the baggage-room, where his baggage is not weighed at all, but is checked in a trice, instead of being daubed and pasted over with nasty paper labels; and he proceeds to a well-warmed, comfortable waiting-room, or more probably directly to the train, carrying himself his small baggage, and usually in ten minutes at most he is off. Had he been abroad, it would have been indispensable at a large terminal station to allow a full half-hour before the departure of the fast express train for buying tickets and registering baggage. The writer recently spent (and wasted of course) twenty-five minutes by the watch during cold weather, but under ordinary circumstances, waiting in the draughty baggage-shed, in the splendid Gare du Nord, or Northern Station, in Paris, simply to register ordinary baggage for London. There, as everywhere, it was placed in line on a truck, and had to wait for *one* machine to weigh and *one* official to register, and for a long queue of shivering, nervous, and impatient travellers to pay out odd sums, often very heavy, after an approximate verification of their "bulle-

tins," and now and then a wordy and futile discussion with the official. As each one escaped from this trial, he marched off to the human cattle-pen, known more euphoniously as first and second class waiting-room, and rejoined his small baggage, fumbled about for a small fee to the porter who had brought it in, having previously given a larger fee to another porter who had brought in his large luggage, trundling it slowly up to the weighing machine; then he tried to compose himself. This was simply the usual trial at large stations. Our waiting-rooms (and cars too) are hot and stuffy; abroad, they are cold and stuffy. — Finally, the unpenning is announced in an outburst of official grandiloquence, and a pell-mell rush ensues, tempered only with official insolence, and obviating all the advantages and rights of first-comers. The train is amply pointed out by signs and officials, and the different classes of carriages are usually painted differently, or distinctly marked, first, second, third, and in some countries a fourth, class. As for the general appearance of the train, the locomotive is likely to strike the American eye as "an old tub." It lacks grace and beauty, color, character, and *sex*,* as a rule; in all of which features American machines excel. The cars are neat, and often elegant in build and ornamentation, especially the first-class, of course, and recently also the second. In size they resemble the long, high freight-cars used with us for hay or grain, and are divided transversely into three or four disconnected compartments, entered by a door on either side, and holding eight or ten persons each; so that a carriage contains from twenty-four to forty passengers. In style and comfort they vary, according to the fare paid. This is an admirable system, thoroughly democratic, and strangely in contrast with our *aristocratic* system; for before the days of palace cars, the poor man had almost no privilege, like the rich, of moving himself or family freely about in a nominally free

* An American locomotive is always a "she," like a ship.

country, for lack of cheap fares, and on account of false pride and social theories.

First-Class Carriages. — The first-class carriage is on a par with our best ordinary cars; but, as indeed is true of all classes, it is far lighter, length for length, than our lumbering cars, and consequently runs on good roads with a far lighter and smoother motion, although probably it "jumps" the track more easily, and in case of accident flies to pieces like a card-house. This lightness, taken in connection with the admirably adapted stuffing of the seats and the delightful head-support, — an extremely important detail quite neglected with us, — causes one to travel a whole day with as little fatigue as half a day in America; at least, such seemed to be the opinion of most travellers. Moreover, the carriages are generally upholstered with great taste and refinement. Instead of the exhausting chromatic panorama of the recent American car, — now being happily often replaced by the elegant Eastlake cars, — the eye falls on soft, sober, harmonious tints, cooling and restful to the traveller's soul. These carriages are found on all trains, and are rarely crowded; so that the traveller acquires a sort of home feeling in his compartment, and has a liberty of action and attitude impossible with us. Smoking is commonly permitted, when all the occupants are agreed to allow it; but, of course, in cold weather ventilation is nearly impossible, and there remains in the cars an ancient odor of tobacco disagreeable to sensitive nostrils. For a large party it is often exceedingly annoying to be separated in the train, as must often happen, since there is no communication after the doors are once locked, as they are nearly or quite everywhere and always, while the train is in motion. This locking is not only a vexatious attack on human dignity, but is horribly dangerous in case of accident (as recently shown at Charenton near Paris). Add to this: first, that in cold weather these carriages are almost de-

prived of the first of creature comforts — warmth — the only heater being a long, narrow metal box of hot water, renewed at the economical discretion of a cold-blooded and soulless corporation or government, and affording at best but a flitting, shadowy relief to the feet and legs alone; and secondly, that there are no toilet arrangements on the train; and the chief evils of the compartment system are before the reader, who may judge whether the first-class carriages on the whole surpass our common cars, or not. As for our palace cars, by day or by night, their superiority to every other railway vehicle in the world (for long journeys, at least) will scarcely be contested. They are little known in Europe, and appear to be *extremely* costly luxuries everywhere.

Second-Class Carriages. — Those of an older type are wretched, rattling affairs, like our own common cars before the days of monitor tops and swell roofs; but latterly a great improvement has taken place, and now there are many specimens of this class quite as comfortable as the first, and running with a delicious smoothness, rarely known in the United States.

Third-Class Carriages. — These are often mere human cattle-cars, except that these biped cattle have the privilege of a hard wooden seat. They are as rarely heated, even in winter, as American horse-cars.

Fares. — The usual fares may be roughly stated to be respectively four, three, and two cents a mile, with an extra charge in many countries for fast or express trains. To these charges must be added, for each journey, sundry fees to officials or employés, and a charge for all above a very small weight of baggage, usually about fifty pounds. The result is, finally, that it costs more to travel first-class in Europe than in palace cars in the United States east of the Mississippi River, — from one to two cents more per mile. The

same is true in a comparison of second-class European travel with the ordinary American.

RAILROADS, STATIONS, ETC. — The railroads are generally well built, level, and straight in England, France, Holland, Belgium, Germany, most of Austria, and in Russia, I believe; while in Switzerland, Italy, Spain, and the Tyrol, they are crooked and fairly *mountainous*, with innumerable tunnels. Level Europe shows a number of rapid trains, which are short and light usually, and expensive. The stations, as I thought, generally surpass ours in size and architecture, and are equally commodious and comfortable, except for the penning in and lack of heating. But even at the smallest, clumsy systems of ticket buying and baggage registering prevail, and there is a cumbersome corps of vociferous officials, whose duties are much too subdivided, according to our notions, especially as, though very polite (*except in France*), they are either unable or unwilling to furnish information outside of their respective and very limited fields of action.

RESTAURANTS. — One word about the delights of some foreign railway restaurants, in France particularly. One may travel in the fastest express in the country, between Paris and Bordeaux, but you must not arrive tired and hungry; so, at breakfast-time, the train stops twenty full minutes, whether late or not, and you find a delicious breakfast awaiting you, hot and cheap. You eat with comfort and security. and re-enter the train to go on to the next meal in the afternoon. The plan is simple and wise. We know that "time is money"; but the French know that "health is money," and may herein teach us reckless Americans a salutary lesson.

NOTES ON THE TABLES.

TABLE 1. HIGH SPEEDS. ENGLAND FAR AHEAD. — The examination of the tables will show that for number of trains and for speed England leads the world, surpassing entirely Continental Europe and the United States. The most civilized sections of the latter approach the mother country most nearly, though still far behind. There are no very long lines in England, of course, — that is, no line of importance over four or five hundred miles long, — so that a comparison of longer routes cannot be made; but up to that length, we must acknowledge our entire inferiority in point of speed. Even between New York and Philadelphia, we cannot match some short runs in England not given in the tables, such as from London to Grantham, 105¼ miles in 2 h. 3 m. (nearly 52 miles an hour), against 48½; London to Bedford, 50 miles in 54 minutes (at the rate of 55½ miles an hour). And again, comparing the average speed between New York and Philadelphia — 34.23 miles an hour — with the average of the 152 English trains examined, viz., 35.07 miles an hour; or with one of the routes to Leeds (186¼ miles), eight trains averaging 41.70 miles an hour, — it is evident that, so far as speed on *paper* goes, we fast Americans are considerably behindhand. In fact, except between New York and Washington and the new Western expresses,* we have no fast trains in America. Our best trains are even behind the fastest French and North German expresses. It is said that in

* The new Chicago lightning (?) express *via* the New York Central Railroad makes just over 40 miles an hour as far as Buffalo, and only 36.75 miles on the whole trip! *Via* the Pennsylvania route, the speed on the through trip is only 35.53 miles an hour. The new limited express from New York to Boston *via* Springfield runs at the through rate of 38.68 miles an hour. Americans travelling abroad should abstain from boasting, at present, of our fast trains.

England the trains are proverbially unpunctual. The writer's very limited experience did not confirm this; and if it is the case, punctuality and running speed are separate matters, and it is certain that some English expresses fly so swiftly that the "*telegraph poles look like a picket fence.*"

TABLE 2. FRANCE. HIGH SPEEDS ON EXCLUSIVELY NATIONAL TRAINS. — In France a very singular and quaint proof of a striking characteristic of the people is to be had from an examination of their time-tables. The Frenchman neither travels much, nor does he invite strangers to enter his country, by rail at least. This fact, well known in other ways, appears strikingly in the official Railway Guide. The fastest train in France is the 8.45 A. M. express from Paris to Bordeaux, which runs about 360 miles in about 9 hours. The Madrid express leaves 45 minutes later, and runs to Bordeaux in 13 h. 40 m.! The fast Marseilles expresses leave at 9 A. M. and 7.20 P. M., reaching Macon in 7 h. 20 m. each. The Italian (Mont Cénis) expresses leave at 11.15 A. M. and 8 P. M., and reach Macon, where they branch off the main line to Marseilles, in 9 h. 28 m. and 8 h. 56 m. respectively! Only one of the fast expresses connects to Geneva. The Rhine-bound expresses from Paris to Strasbourg and Cologne run about 10 miles an hour slower than the great strictly national expresses above mentioned. The London expresses run 10 miles an hour slower on the French side of the Channel. The chief Brussels expresses run about 29 miles an hour in France, and in the Belgic territory nearly 33 miles an hour! The fastest train in Germany and on the Continent is from Berlin to Cologne, — over 360 miles in 9 hours, or 40 miles an hour, bound for Paris; the speed dropping to 27 miles in French territory! The French, by their Railroad Guide, stand self-convicted of narrow interests and provincial self-satisfaction and exclusiveness. In strange contrast with England, France is soci-

ologically an island, though physically surrounded chiefly by dry land!

TABLES 3 AND 4. NORTH AND SOUTH GERMANY. DIFFERENCE IN SPEED. — A comparison of speed, etc., in Northern and Southern Germany is interesting. It will be noted how highly civilized is the former as compared with the latter. The difference is great, and one might say, both politically and ethnologically, significant and striking. (See Table 22.)

TABLE 5. AUSTRIA. — Austria, strangely enough, scarcely surpasses Southern Germany in speed. On their best lines they run not much over fifty per cent faster than on the western half of our great transcontinental route from New York to San Francisco. This makes Austria a very slow country. They charge, moreover, from fifty to seventy-five per cent less fare.

TABLE 7. HOLLAND AND BELGIUM — Show high speeds and low fares.

TABLES 8 AND 9. ITALY AND SPAIN. — The peninsular countries show a fair speed considering how very mountainous they are.

TABLES 6 AND 9. RUSSIA, SWITZERLAND, AND PORTUGAL. — Russia makes a fair show, and Portugal and Switzerland do as well as one would expect from their small size and poverty and mountainous difficulties.

THE UNITED STATES. — Railway civilization in America seems to hold a westerly course. The Middle States naturally exhibit the best speeds in and about the great cities of the New World: New England is a very good second. In the Western States no notable speed is to be found; the trains run at a very uniform rate, which is rather lower than is commonly supposed. Thence in the Northwest States and Southwest States (chiefly Texas), and in the Far West, speeds continue to diminish, showing the confines of civilization. In the Southern States the speed diminishes as we

go south from Washington, until we encounter the southerly overflow of energy from the West, notably through the channel of the Louisville and Nashville Railroad.

Remarkable Slowness. — The Wisconsin Central Railroad carries off the palm in the slow race, having a record of 351 miles in 52 h. 20 m., — 6⅔ miles per hour. This seems ludicrous enough. But suppose Xerxes with his army, or Hannibal, or Cæsar, or Moses and the Israelites had had such a train with Pullman hotel cars attached, how thankful would they have been, and how dull and prosaic their adventures! For oil to cool a hot box is not as romantic as vinegar to melt the rocks.*

Fares. The Class System. Differentiation. — In the matter of fares there is little to say by way of comparison, except as to the system of charges and their bearing on speed. The European system is the differentiative or class system, and the writer believes the truly economical and democratic system. Everywhere there are at least three classes of charges, the first-class charge being on the average 3.69 cents a mile; the second, 2.70 cents a mile; the third, 1.76 cents a mile. (See Table 24.) In some cases, in

* The following data of clear running speeds will interest and astonish many people. As showing the effect of heavy grades and curves, the following figures were noted last September (1881), on the Boston and Albany Railroad on the 8.30 A. M. Chicago express, with two locomotives and six cars, in the Berkshire Mountains, where the maximum grade exceeds 80 feet to the mile. The speed from the 121st mile-post up to the 139th (summit) varied from 21.25 to 30 miles an hour; exc'uding five minutes lost by the stop at Chester, the speed was about 26½ miles an hour. The next 11 miles, all down grade, were made in less than 15 minutes, or at 44 or 45 miles an hour, the maximum speed being about 48 miles. On a journey from Middleboro', on the Old Colony Railroad on a local express, the maximum speed for one mile was 51½ miles an hour, and the clear running speed averaged nearly 40 miles an hour, though there was but one locomotive to eight or ten cars, and yet so much time was lost at three stations and in slowing up elsewhere, that the schedule time made, in a 34-mile run, was but 30 miles an hour. Ordinary through accommodation trains constantly run from 40 to over 50 miles an hour for a short distance, the maximum speed being double the actual speed attained including stops. Mere ordinary express trains run no faster while under way, — the saving is in not stopping.

Germany and in Italy, there is a fourth-class charge, — in Germany, 0.80 cents a mile; in Italy, 1.28 cents a mile. In addition to these charges, a special charge is made for *speed* in Germany, Austria, Belgium, Italy, and on a few lines in other countries, which goes to make the express fare. Thus in Germany there are seven rates of fare, highly differentiated, the highest charges in Northern Germany being nearly treble the lowest charges. In Europe generally they are more than double.

Effect of Differentiation on Speeds. — Now, if two or more classes of cars run on each train, this differentiation of fares will be partially or wholly inoperative to produce differentiation of speed. As this is more or less the case everywhere in Europe, it is clear that a mere *schedule* of different fares does not necessarily indicate differentiation of speed; but the differentiation in average charges per mile on different trains would be a true test. So in France, where the great expresses have only first-class carriages, there is a substantial differentiation of charges per mile, and so in speed, as against trains carrying all classes.

It would be idle, without such further data, to speculate on the relation of differentiated speeds and fares in each particular country; but in Europe, in general, the result is extremely striking. On 140 routes the average speed of the 140 fastest trips exceeds that of the 140 slowest trips by 46 per cent. In America such excess is only 25 per cent.* In Europe the nominal differentiation of fares is 114 per cent. In America, zero. The conclusion is that one important explanation of the absence of great speeds in America is this lack of differentiation in charges. If we charged three rates of fares, — viz., 4, 3, and 2 cents a mile, — our fastest trains would run say 10 per cent faster, and our slowest trains 10 per cent slower.

* Due almost entirely to omission of stops by express trains.

TABLES 18 TO 21. INTERNATIONAL AND GREAT TRUNK ROUTES. — Tables 18 and 19 give routes of this character, which do not appear in the preceding tables, and which are competitive. Tables 20 and 21 give the summary statement of all these routes. It is very noteworty here (see speed columns, Table 22) that there is a great difference in the comparative speeds and fares in great through travel and in national or local travel, as shown in the first sixteen tables. The range of speed has been shown to be 46 per cent in Europe, and but 25 per cent in the United States (see Table 22), with this result, that the average speed of the fastest trips on one hundred and forty routes in Europe is 25.64 miles an hour against 23.72 in the United States, while the slowest trips average in Europe 17.59 miles an hour against 18.93 with us. The total average is nearly the same, — 22.94 in Europe, 22.69 with us. When, however, we come to *great through travel* our superiority is apparent in the average speed, which is 23.12 miles an hour in Europe and 24.31 in the United States; and, although the average of fastest trips in Europe is still .59 of a mile an hour above our average, viz., 24.60 against 24.01 miles an hour, still, this average in Europe has dropped from the national or local standard of 25.64 miles an hour to the extent of 1.04 miles, while in the United States the average is raised .29 of a mile in favor of great through travel. Similarly, the average of the slowest trips in Europe is raised only 1.21 miles an hour, viz., to 18.80 miles, while with us it is raised 1.91 miles in favor of through travel; so that, as to speed, great through travel is more highly favored in the United States than in Europe.

So, also, as to fares (see Table 24, last column). The average fare in Europe, 2.74 cents per mile, is raised to 3.02 cents, adversely to great through travel, while in the United States the average, 3.79 cents a mile, is lowered to 2.88

cents in favor of such travel. This may appear to be due to the fact that there is less third-class travel to such distances. In fact, the fares were found only of the first and second class in several cases (see Table 20). But a comparison of the average first and second class fares for all Europe and these selected international and trunk routes given in Table 20 will show the same result, namely, a higher charge by about a quarter of a cent a mile adverse to through travel. It is a very striking and forcible lesson of the positive material blessings of union and concord in our great country. The same principle of favoring great through national travel appears in England, but, I believe, not elsewhere in Europe (certainly not wherever uniform rates are established by government, as in France, Belgium, and Italy).

Ratio of Railway Civilization. — In one of the middle columns of Table 22 is given the ratio of the average speed in miles per hour to the average fare in cents per mile in each country. This ratio is very striking. It seems to show roughly at a glance the relations of the different countries in the scale of civilization. It is of course a rough estimate of the relation, because the average fare in Europe, here obtained, is but nominal. For instance, in England $\frac{5}{6}$ of the travel is now third class, and the average fare must certainly therefore fall under $2\frac{1}{2}$ cents per mile; and such is probably the case generally in Europe. The figures are, then, rather a rough suggestion; but were the average speed and fares exactly known, and this exact ratio obtained, it would doubtless prove a very valuable method of classification of railroads. First-class railroads would rank about 10 or 15, — and some far western roads would fall into class one, — and this extraordinary difference in ratio is due to the law that in the advance of civilization the *highest speeds are concomitant with the lowest fares*, — both being alike demanded; and it should also be remembered that the figures

of the charges per mile are merely nominal values; and this law will be infinitely more brought into prominence by considering that the true estimate of cheap fares is the distance that the laboring man can travel on a day's wages. In France, for instance, a workman gets perhaps 60 cents a day, which would carry him less than 30 miles, third class; in Italy (and Spain, I presume) he would get perhaps 20 or 30 cents a day, on which he could travel only 10 or 15 miles; whereas in the United States the workman can travel 40 or 50 miles on a day's wages, and in New England and the Middle States 60, in the Far West scarcely more than 25 perhaps, down South possibly still less. But it is certain that railroad travel is less of a tax on the resources of Americans than Europeans, since our prices and incomes are all on a larger scale.

Defects in American System. No Differentiation of Fares, and no Consequent Differentiation of Speed.— Two great defects in our American system of railroad travel are the lack of differentiated fares, and our failure to lead in speed, — which must depend to the extent of about 10 per cent, as has been shown, on such differentiation. We contend that our system of uniform charges is to be denounced as being utterly opposed to the spirit of the unwritten constitution of America, — that it is *utterly undemocratic!*

Our Present System undemocratic. Argument in Favor of Second and Third Class Fares. — The system is doubtless based on two grounds, the practical ground, and the sentimental ground; practically it is much easier to run trains with but one class of conveyances than with three. For the matter of sentiment, it is doubtless the feeling that "all men are born free and equal," which tends to keep us even from the consideration of the subject of second-class and third-class travel. To many people, it will seem preposterous even to agitate such an

aristocratic question. The truth is, however, we think, quite the other way: the European system is the truly democratic one. The above-quoted maxim is venerable, and sounds fully as well as an æsthetic poem on a piece of cracked crockery; but the writer confesses his utter inability to discover that it has much of a meaning when transplanted from the political document in which it is in place and in conformity with the truth, and is applied to mankind in a vague, general way. We have all been born *politically* free in this country since 1865, and are *politically equal;* that is, the *men* are. (The *women* are neither free, nor equal, we presume, according to the Constitution.) But how can it be said that we are born *so* mentally, morally, and physically, and, above all, *pecuniarily*, free and equal that the poor man must pay three cents to go a mile on the rails, where Vanderbilt and Jay Gould go for nothing? Differentiation of railway fares cannot possibly rest on anything but difference of means; and it is absurd to apply the above glittering maxim to people's purses; and we claim that to charge all alike is outrageously *undemocratic*, because it enables the rich to travel as much as they please, and so to seek better fortune wherever they please; but the poor are kept at home, to starve if they can't work, because, although they can get everything else in America cheap, they can't get from one place to another at any less rate than the millionnaire. Of course if our railroads were to adopt a one-cent rate for third-class travellers, it must of necessity follow that those who pay less get less; but they would get what they want and must have without paying a ridiculous extra sum for high speeds, and comforts, and luxuries, and gilding, and varnish, which really must be at the command of the rich and well-to-do only. The growing palace-car travel has not yet been adverted to: it certainly does constitute a separate class of travel, it certainly is aristocratic in its nature, and

yet no one hears of any outcry against them nowadays,* and no one is ashamed to travel in an ordinary car, or thinks less of his neighbor for so doing. How, then, is it to be supposed that a further classification in the opposite direction should excite ill-feeling, or be taken as an attempt to undermine democratic institutions? It would be equally ridiculous in those who saved money by it, and in those who continued to travel as they did before. We contend that it is essentially democratic to propose to establish three different charges, for example, between New York and Chicago, — three cents a mile for a speed of 40 miles an hour for example, with all first-class accommodation and comfort; two cents for 30 miles an hour with plainer cars and fewer traveller's luxuries; and one cent a mile for the poor man with his large family. Here and there, it is true, emigrant rates are to be found, and scattered second-class charges; but no general system prevails in America.

We therefore suggest, to begin with, the experiment of second-class travel. Should the notion of it once become established, it might grow, and eventually absorb the bulk of our travel, when a provision could be made for a still cheaper class. Besides the benefit to the poor and those in moderate circumstances, and to commercial houses sending travelling agents, the railroads would get rid of the intolerable pressure in the direction of low fares and of anti-monopoly cries, and would be enabled to answer another great requirement of high civilization, — great speed, — which is now a difficult problem in America.

Increased Speed by Reduction of Weight of Cars. — High speed could also be generated by a reduction of the enormous weight of our cars, — another great obstacle. It

* I have been told that the first palace cars on the Boston and Albany Railroad were burned, or attempted to be burned, in the car-house in Boston from anti-aristocratic motives.

is said that weight means strength, and both are necessary to insure safety; but are not our railroads safe enough, as shown in the early part of this article? If greater safety is necessary, and there can be no excess of it, can it not be attained otherwise than by perpetually interrupting all the progress of the world, by forcing every traveller to carry about a ton or more of wood and iron with him? *

In the great future of the world in which we hope our great country will take the lead, we hope to see unlimited travel within the means of all, and at such a speed that all mankind can have access to any portion of the globe within a few days! Within this century, we shall very probably have plenty of trains running across the entire continent in seventy-two hours. New-Englanders will be able to breakfast at home, visit Niagara Falls in the afternoon, and breakfast in Chicago the next morning, and see pretty much the whole West in a month's vacation! We shall go from Boston to New York in three or four hours for still fewer dollars; across the ocean in four or five days; and so on and so on. The whole world will be drawn closer together, and universal brotherhood will begin in earnest, without other missionaries than polite conductors, who will collect the mission funds, and happy travellers, who will contribute enthusiastically.

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* A train generally weighs as many tons more or less as it carries passengers. I have been informed by a gentleman of great authority on railroads, that the American passenger train is usually over twice as heavy as the English train for equal numbers of passengers carried.

EXPLANATORY NOTE TO TABLES.

DATE OF TABLES, DEC. 1, 1880.

SOURCES OF FIGURES.

In England, — "A B C Railway Guide," giving routes from London only to all points in the kingdom.

On the Continent, — Dickens's admirable "A B C Dictionary of Continental Railways."

In the United States and Canada, — "Rand and McNally's Railroad Guide."

In New England, — "Snow's Pathfinder."

TABLES.

The first nineteen are analytical.

All these are arranged on the same plan. A railway centre was selected in each country or group of States, and the leading railroads thence were examined as to passenger service. *First*, the termini, route, and distance are given. Next, the number of trains *each* way (if unequal, the less number). Then the duration of the fastest and slowest trips either way, and the average length of all trips, and the corresponding speeds, including all stops (except ferries in one or two cases noted).

Secondly, The Fares. In Europe, of every class (and also express charges whenever found), in local currency, and also in dollars and cents. In America, the ordinary fares, and the same including palace-car and sleeping-car charges. Next, corresponding rates per mile in cents and hundredths.

The abbreviations used will not require explanation.

The last four tables summarize the results of the analytical tables.

Table 22 gives, — *First*, The aggregates of the columns of details (except fares) in the analytical tables. *Secondly*, The range or differentiation of speeds and fares, and the ratio of railway civilization. *Thirdly*, The range of speeds, or the maximum, minimum, and average of the figures in the respective speed columns of fastest, slowest, and average trips.

Table 23 gives the classification and distribution of fares (*i. e.*, in Europe) in comparison with the one-class system in America (omitting palace and sleeping car fares on both continents).

Table 24 shows the range of charges in each class in cents per mile.

Maxima and minima are printed in full-faced type everywhere in the analytical tables, for convenient comparison with the summary tables.

Table 25 is merely a rearrangement of the chief data of the three preceding tables, in order to rank the different countries as to speeds, fares, etc.

RATES OF EXCHANGE, DEC. 1, 1880.

1 £,	$4.85,	England.
1 franc or lira,	0.192,	France, Belgium, Switzerland, Italy.
1 mark,	0.238,	Germany.
1 florin or gulden,	0.41,	Austria.
1 guilder,	0.40,	Holland.
1 rouble,	0.79,	Russia.
1 real,	0.0503,	Spain.
1 millreis,	1.12,	Portugal.

LIST OF TABLES.

ANALYTICAL.

EUROPEAN. — NOS. 1–9.

No. 1. England.
No. 2. France.
No. 3. North Germany.
No. 4. South Germany.
No. 5. Austria, Hungary.
No. 6. Belgium, Holland.
No. 7. Switzerland, Russia, Turkey.
No. 8. Italy.
No. 9. Spain, Portugal.

AMERICAN. — NOS. 10–16.

No. 10. New England States.
No. 11. Middle States.
No. 12. Western States.
No. 13. Southern States.
No. 14. Northern and Northwestern States, Southwestern States.
No. 15. Far West.
No. 16. Canada and Provinces.

No. 17. London to Continent.

INTERNATIONAL OR GREAT TRUNK ROUTES. — NOS. 18–21.

No. 18. Such routes in Europe not appearing elsewhere analytically.

No. 19. Such routes in America not appearing elsewhere analytically.

No. 20. Summary of such routes in Europe.

No. 21. Summary of such routes in America.

GENERAL SUMMARY AND COMPARATIVE TABLES.

No. 22. Speeds. Maximum, minimum, and average. Various ratios.

No. 23. Fares. Classification and distribution.

No. 24. Fares. Rates per mile. Maximum, minimum, and average.

No. 25. Rank of countries as to speeds and fares, etc.

FROM Station.	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			Express Fares.		Ordinary Fares.			Rate per Mile.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I. s. d. $ cts.	II. s. d. $ cts.	I. s. d. $ cts.	II. s. d. $ cts.	III. s. d. $ cts.	I. cts.	II. cts.	III. cts.
Pop. 3,254,000,			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.								
King's Cross, LONDON	Edinburgh ..	190,987	397	5	9.00	12.10	10.05	44.11	32.63	39.40	.....	.....	57/6 $13.94 †	44/9 $10.85	32/8 $7.92	3.51	2.73	1.99
Euston ..... "	" ..	.....	401	6	9.55	12.45	10.53	40.44	31.45	36.87								
St. Pancras.. "	" ..	.....	404	3	10.05	14.25	11.25	40.07	28.02	35.40								
	Tots. & Avs.*	.....	Av. 400 397	14	9.00	14.25	10.44	44.11	28.02	37.46								
Euston ..... LONDON	Liverpool....	493,405	201	13	4.50	6.30	5.22	41.74	31.04	37.58	.....	.....	29/ $7.03	21/9 $5.28	16/9 $4.06	3.48	2.61	2.01
St. Pancras.. "	"	.....	?	6	5.30	6.40	.....	.....	.....	.....								
King's Cross, "	"	.....	?	6	5.55	8.00	.....	.....	.....	.....								
Paddington .. "	"	.....	229	4	5.25	8.20	7.06	42.28	27.48	32.24								
	Tots. & Avs..	.....		29	4.50	8.20	.....	.....	.....	.....								
Euston ..... LONDON ..... "	Holyhead..	.....	264	4	6.35	8.00	7.30	40.10	33.00	36.41	.....	.....	43/8 $10.62	34/ $8.25	24/1 $5.84	4 03	3.12	2.21
	Dublin	246,000	?	4	11.05	13.00	.....	.....	.....	.....	60/ $14.55	45/ $10.81	47/6 $11.52	36/6 $8.85	23/ $5.59			
King's Cross, LONDON	Leeds	259,212	186	8	4.00	5.00	4.28	46.56	37.25	41.70			25/9 $6.24	20/ $4.85	15/5 $3.74	3.35	2.60	2.01
St. Pancras.. "	"	.....	196	9	4.30	7.50 6.10	5.05	43.55	25.02 31.78	38.51								
Euston ..... "	"	.....	226	9	6.20	9.25 8.05	7.42	35.68	24.00 27.96	29.33								
	Tots. & Avs..	.....	Av. 202 186	26	4.00	9.25	5.48	46.56	24.00	36.31								

*And fastest and slowest trips and speeds.

† Fares same where not given in competitive routes.

TABLE I.—ENGLAND—Continued.

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			Express Fares.		Ordinary Fares.			Rate per Mile.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I. s. d. $ cts.	II. s. d. $ cts.	I. s. d. $ cts.	II. s. d. $ cts.	III. s. d. $ cts.	I. cts.	II. cts.	III. cts.
			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.								
Euston													24/6	20/	15/5			
LONDON	Manchester ..	351,189	188½	12	4.40	6.50	5.06	40.39	27.58	36.91	.....	.....	$5.94	$4.85	$3.74	**3.15**	**2.57**	2.05
" King's Cross,																		
"	" ..	.....	203½	6	4.50	5.30	5.02	42.10	37.00	40.36								
" St. Pancras..																		
"	" ..	.....	189	7	4.40	5.45	4.55	40.50	32.87	38.39								
	Tots. & Avs..	.....	Av. 193⅔ 188½	25	4.40	6.50	5.02	42.10	27.58	38.15								
Paddington ..						6.00 }			**19.75** }		26/1	18/3	20/10	15/8	10/6	(Ex.)**5.34**	(Ex.)**3.74**	
LONDON	Bristol	182,552	118½	10	2.36	4.40 }	3.33	45.58	25.40 }	33.35	$6.32	$4.42	$5.05	$3.77	$2.55	4.27	3.18	2.15
Waterloo													15/6	11/	6/6			
"	Southampton.	53,741	78½	12	2.07	3.15	2.41	37.20	24.23	29.46	.....	.....	$3.76	$2.67	$1.58	4.77	3.39	2.00
Victoria											12/3	8/6	10/	6/6	4/2	(Ex.) 5.94	(Ex.) 4.12	
"	Brighton	90,011	50	19	1.10	2.30	1.43	42.86	20.00	29.19	$2.97	$2.06	$2.42	$1.58	$1.07	4.85	3.15	2.14
Cannon St.. ..											20/	15/	18/6	13/6	6/2	(Ex.)**6.34**	(Ex.)**4.75**	
"	Dover.....	28,506	76½	10	1.42	3.03	2.22	45.00	25.08	32.28	$4.85	$3.67	$4.49	$3.27	$1.49	**5.86**	**4.28**	**1.95**
Victoria																		
"	"	.....	77½	8	1.45	3.33	2.31	44.43	21.90	30.82								
Liverpool St.,													13/3	10/	8/			
"	Harwich	6,079	70	7	1.50	3.00	2.25	38.18	23.33	**29.08**	.....	.....	$3.21	$2.42	$1.94	4.59	3.46	**2.77**
Grand Totals and Averages..																		

TABLE II. — FRANCE.

FROM	TO	Population.	Distance.	Number of Trains.	Fastest Trip.	Slowest Trip.	Average Trip.	Highest Speed.	Lowest Speed.	Average Speed.	Express Fares. I.	Express Fares. II.	Ordinary Fares. I.	Ordinary Fares. II.	Ordinary Fares. III.	Rate per Mile. I.	Rate per Mile. II.	Rate per Mile. III.
R. R.			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.	f. c. $ cts.	f. c. $ cts.	f. c. $ cts.	f. c. $ cts.	f. c. $ cts.	cts.	cts.	cts.
PARIS, Orleans..... Pop. 1,989,000	Bordeaux ..	215,000	363¼	4	9.07	16.30	12.05	**39.87**	**22.03**	**30.07**	.....	.....	72.00 $13.82	54.0 $10.37	39.60 $7.60	3.80	2.85	2.09
"	*P. L. M..... Marseilles..	300,000	535½	7	14.42	29.25	21.13	36.43	18.20	25.23	.....	.....	106.25 $20.40	79.90 $15.34	58.40 $11.21	3.81	2.86	2.09
"	P. L. M..... Modane	1,000?	430½	4	15.54	24.50	19.25	27.07	17.34	22.18	.....	.....	87.00 $16.70	65.20 $12.52	47.40 $9.10	3.88	2.91	2.11
"	Est..... Basle.....	45,000	326	3	11.25	16.54	13.50	28.55	19.29	23.55	64.20 $12.33	47.80 $9.18	63.20 $12.13	46.80 $8.98	33.95 $6.52	(Ex.) 3.78 3.72	(Ex.) 2.82 2.76	1.99
"	Est..... Strasbourg..	100,000	311	5	10.27	16.37	13.33	29.76	18.72	22.95	61.30 $11.77	45.50 $8.74	59.90 $11.50	44.10 $8.47	31.80 $6.10	(Ex.) 3.78 3.70	(Ex.) 2.81 2.72	1.96
"	Nord ..... Cologne....	135,000	308	4	11.10	17.05	13.24	27.58	18.03	22.97	47.80† $11.38	35.60 $8.47	45.00† $10.71	33.30 $7.92	23.35 $5.56	(Ex.) 3.69 3.48	(Ex.) 2.75 2.57	1.80
"	Nord ..... Calais.....	13,000	184½	6	5.00	9.35	7.37	36.90	19.25	24.21	.....	.....	36.50 $7.01	27.35 $5.26	20.10 $3.86	3.80	2.85	2.09
"	Ouest..... Havre.....	92,000	141½	9	4.18	8.47	6.18	32.91	16.11	22.75	.....	.....	28.05 $5.39	21.00 $4.04	15.40 $2.96	3.81	2.85	2.09
"	Ouest..... Brest.....	100,000?	387	4	14.00	20.20	17.16	27.64	18.89	22.42	.....	.....	76.70 $14.73	57.55 $11.04	42.15 $8.09	3.80	2.85	2.09
"	Ouest..... Cherbourg..	50,000?	230½	4	8.50	14.50	11.52	26.09	15.54	19.42	.....	.....	45.65 $8.76	34.20 $6.57	25.05 $4.81	3.80	2.85	2.09
"	Orleans..... Toulouse...	132,000	466½	4	15.20	25.14	20.04	30.42	18.49	23.25	.....	.....	89.05 $17.10	67.05 $12.87	48.35 $9.28	3.67	2.76	1.99
BORDEAUX, Midi? Pop. 215,000	Pau.....	29,000	144½	4	5.20	11.40	7.55	27.09	**12.38**	**18.27**	.....	.....	28.65 $5.50	21.45 $4.12	15.70 $3.01	3.81	2.85	2.09
"	Midi ..... Marseilles..	300,000	408½	2	12.35	19.15	15.42	32.46	21.22	26.01	.....	.....	81.05 $15.56	60.90 $11.70	44.60 $8.56	3.81	2.86	2.09
"	Midi ..... Marseilles.. P. L. M.	.....	422½	1	16.57	20.05	18.31	**24.93**	21.04	22.82			Fares higher proportionally to greater distance.					
MARSEILLES..... Pop. 300,000	Nice	50,000	139	6	5.05	9.07	7.07	27.34	15.25	19.53	.....	.....	27.65 $5.31	20.70 $3.97	15.15 $2.91	3.82	2.86	2.09

* Paris-Lyon-Méditerranée. † German marks.

TABLE III.—NORTH GERMANY.

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			Express Fares.			Ordinary Fares.			Rate per Mile.			Fare and Rate.
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I. mks. pf. $ cts.	II. mks. pf. $ cts.	III. mks. pf. $ cts.	I. mks. pf. $ cts.	II. mks. pf. $ cts.	III. mks. pf. $ cts.	I. cts.	II. cts.	III. cts.	mks. $ cts.
			Miles		h. m.	h. m.	h. m.	Miles	per	Hour.										
Pop. 969,000 via Hanover .... BERLIN ..... via Magdeburg..	Cologne	135,000	362½	6	9.00	19.05	14.05	**40.28**	19.00	25.75	53.30 $12.68	39.60 $9.42	28.50 $6.78	44.10 $10.50	33.80 $8.04	20.70 $4.93	(Ex) 3.50 **2.89**	(Ex) 2.60 **2.22**	(Ex) 1.87 **1.36**	
"	"	.....	362½	2	10.19	12.58	11.50	35.14	**27.96**	**30.61**										
	Totals and Averages		362½	8	9.00	19.05	13.31	40.28	19.00	26.81										
BERLIN ..... via Wittenberge,	Bremen	102,000	211	3	6.35	9.23	8.05	32.05	22.49	26.12	30.70 $7.31	22.70 $5.40	17.00 $4.05	27.20 $6.47	20.50 $4.88	13.60 $3.24	(Ex) 3.46 3.07	(Ex) 2.56 2.31	(Ex) 1.92 1.54	6.30
" ..... via Stendal.....	Hamburg.....	264,000	177½	5	4.45	8.50	6.42	37.37	20.09	26.49	27.20 $6.47	20.10 $4.78	14.60 $3.47	23.00 $5.47	17.20 $4.09	12.50 $2.97	(Ex) 3.65 3.08	(Ex) 2.09 2.31	(Ex) 1.96 1.66	$1.50 0.84
"	"	.....	185	3	5.05	8.45	6.40	36.39	21.14	27.75										
	Totals and Averages		181½	8	4.45	8.50	6.41	37.37	20.09	26.97										
BERLIN	Stettin	81,000	84	6	2.23	5.06	3.36	35.24	**16.47**	23.28	13.50 $3.21	10.00	....	12.00 $2.86	9.00 $2.14	6.00 $1.43	(Ex) **3.83** **3.40**	(Ex) **2.83** 2.55	1.70	9.30
"	Dantzic	98,000	284½	3	9.08	15.53	11.32	31.15	17.91	24.66	41.00 $9.76	30.50 $7.26	21.30 $5.07	37.60 $8.95	27.50 $6.54	18.40 $4.38	(Ex) 3 43 3.15	(Ex) 2.55 2.30	(Ex) 1.78 1.54	$2 21 0.78
"	Breslau	239,000	204½	5	6.35	11.00	8.26	31.06	18.59	24.27	29.70 $7.07	22.00 $5.24	15.50 $3.69	26.00 $6.19	19.60 $4.66	13.10 $3.12	(Ex) 3.46 3.03	(Ex) 2.56 2.28	Ex) 1.80 1.52	6.60 $1.57 0.77
via Roderau.... BERLIN ..... via Elsterwerda.	Dresden.....	197,000	116½	5	3.08	4.55	4.04	37.18	23.69	28.64	15.70 $3.74	11.70 $2.78	8.20 $1.95	14.50 $3.45	10.90 $2.59	7 30 $1.74	(Ex) **3.41** 3.15	(Ex) **2.54** 2.37	(Ex) **1.78** 1.59	3.00
"	"	.....	109½	4	3.02	4.33	3.60	36.10	24.07	27.39										$0.83 **0.76**
	Totals and Averages		113	9	3.02	4.55	4.02	37.18	23.69	28.09										

BERLIN	Leipsic	127,000	101	6	3.05	5.00	3.53	32.76	20.20	26.06	15.40 $3.66	11.80 $2.81	8.80 $2.09	13.20 $3.14	9.90 $2.36	7.20 $1.71	(Ex) 3.63 3.11	(Ex) 2.78 2.33	(Ex) **2.07** 1.70	3.70 $0.88 **0.87**
" via Halle.....	Frankfort-on-Main..	118,000	327½	4	11.30	17.10	13.41	**28.48**	19.08	**22.60**	48.90 $11.64	36.30 $8.64	25.40 $6.04	43.40 $10.33	32.60 $7.76	21.80 $5.19	(Ex) 3.55 3.15	(Ex) 2.64 2.37	(Ex) 1.85 1.58	
" via Nordhausen.	" " "	.....	338½	2	10.30	17.10	13.31	32.24	19.72	25.04										
" via Magdeburg..	" " "	.....	360	3	11.40	19.45	15.03	30.86	18.23	23.93										
	Totals and Averages	.....	342	9	10.30	19.45	14.06	32.24	18.23	23.59										
Pop. 197,000 DRESDEN	Breslau	239,000	167½	3	5.44	7.36	6.51	29.22	22.04	24.47				21 40 $5.09	18.10 $4.31	12.80 $3.05	3.04	**2.57**	**1.82**	
"	Leipsic.....	127,000	74	8	2.12	4.22	2.56	33.64	16.95	25.18	11.60 $2.76	8.70 $2.07	5.80 $1.38	9.60 $2.28	7.20 $1.71	4.80 $1.14	(Ex) 3.73 3.08	(Ex) 2 80 2.31	(Ex) 1.86 1.54	

TABLE IV.—SOUTH GERMANY.

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			Express Fares.			Ordinary Fares.			Rates per Mile.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I. mks. pf. $ cts.	II. mks. pf. $ cts.	III. mks. pf. $ cts.	I. mks. pf. $ cts.	II. mks. pf. $ cts.	III. mks. pf. $ cts.	I. cts.	II. cts.	III. cts.
			Miles		h. m.	h. m.	h. m.	Miles	per	Hour.									
Via Bodenbach..											18.70	14.10	9.40	17.50	13.20	8.80	(Ex.) 3 74	(Ex.) 2 82	(Ex.)**1.88**
DRESDEN.....	Prague.....	186,000	119	4	4.38	7.15	6.07	25.68	16.41	19.47	$4.45	$3.36	$2.24	$4.16	$3.14	$2.09	3.50	2.64	1.76
Zetschen.....	"																		
Pop. 197,000																			
"			121¼	3	6.23	8.48	7.39	19.03	13.81	15.87	Express	same,		all	a trifle	lower.			
	Totals & Av's,	.....	120¼	7	4.38	8.48	6.46	25.68	13.81	17.72									
via Hof'bruck...	Nuremberg ..	98,000	257¼	2	10.47	12.10	11.32	23.88	**21.31**	22.32	42.70	31.90	.....	33.40	23.70	15.55	(Ex.) 3 95	(Ex.) 2 95	
via Erlangen....	"	.....	243¼	1	14.35	16.10	15.22	**16.70**	15.06	**15.84**	$10.16	$7.59	.....	$7.95	$5.64	$3.70	3.09	2.19	**1.44**
											all	lower	propor	tionally	to less	distance			
	Totals & Av's,	.....	250½	3	10.47	16.10	12.49	23.88	15.06	19.70									
											.....	.....	.....	42.65	30.10	19.75			
											.....	.....	.....	$10.15	$7.16	$4.70	3.38	2.39	**1.57**
via Eger.....	Munich	169,000	300	2	14.51	17.00	15.49	20.20	17.65	18.96	63.60	47.40	.....	54.80	36.80	27.80	(Ex.)**4.73**	(Ex.)**3.53**	
via Nuremberg..	"	.....	320	2	15.10	17.00	16.18	21.10	18.82	19.63	$15.14	$11.28	.....	$13.04	$8.76	$6.62	**4.08**	**2.73**	**2.07**
	Totals & Av's,	.....	310	4	14.51	17.00	16.04	21.10	17.65	19.30									
Via Mayence....														18.30	13.20	8.40			
FRANKFORT.....	Cologne.....	135,000	136½	7	4.45	7.46	6.09	**28.74**	17.58	**22.86**	.....	.....	.....	$4.35	$3.14	$2 00	3.19	2.30	**1.46**
via Rudesheim..																			
"	"	.....	141¼	4	5.25	7.43	6.28	26.12	18.34	21.90	I. & III.	a little	higher,	II. a	little	lower.			
via Bonn.....																			
"	"	.....	144½	2	6.47	8.10	7.21	21.30	17.68	19.64									
Pop. 118,000	Totals & Av's,	.....	141	13	4.45	8.10	6.26	28.74	17.58	21.66	21.80	15.10	10.70	18.55	12.25	7.95	(Ex.) 3.59	(Ex.) 2.49	(Ex.)**1.76**
"	Strasbourg...	100,000	144½	5	5.43	9.03	6.55	25.28	15.97	20.89	$5.19	$3.59	$2.55	$4.41	$2.91	$1.89	**3.06**	2.02	1.31
"	"		152½	4	5.37	9.34	6.53	27.15	15.94	22.13									
	Totals & Av's,		148½	9	5.37	9.34	6.54	27.15	15.94	21.44							(Ex.) 3.53		
											37.40	26.15	.....	32.75	21.65	13 90	3.09	(Ex.) 2.47	
"	Munich.....	169,000	252½	4	9.40	20.18	13.06	26.12	**12.44**	19.28	$8.90	$6.22	.....	$7.79	$5 15	$3.31	(Ex.)**3.50**	2.04	**1.31**
Pop. 169,000											20.15	14 20	.....	17.70	11.75	7.55	3.07	(Ex.)**2.47**	

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			Express Fares.			Ordinary Fares.			Rate per Mile.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I.	II.	III.	I.	II.	III.	I.	II.	III.
											g. kr. $ cts.	g. kr. $ cts.	g. kr. $ cts.	g. kr. $ cts.	g. kr. $ cts.	g. kr. $ cts.	cts.	cts.	cts.
			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.									
via Limbach.. VIENNA.....	Munich	169,000	266	2	9.45	17.55	13.25	27.28	14.85	19.81	mks.42.45 $10.10	31.30 $7.45	....	35.85 $8.53	24.95 $5.94	16.45 $3.91	(Ex) 3.80 3.21	(Ex) **2.80** **2.23**	**1.47**
via Salzburg... "	"	.....	290	3	11.05	17.45	13.36	26.16	16.34	21.33	Apparent	ly hig	her pr	oportional	ly to	distance.			
Pop. 1,021,000 VIENNA.....	Tots. & Avs..	.....	278	5	9.45	17.55	13.32	27.28	14.85	20.73									
via Gmund ... VIENNA.....	Prague.....	186,000	217½	3	7.20	11.56	9.54	29.66	18.23	21.96	g. 20.41 $8.37	15.37 $6.30	10.26 $4.22	16.80 $6.89	12.60 $5.17	8.40 $3.44	(Ex) 3.85 3.17	(Ex) 2.90 2.37	(Ex) **1.94** 1.58
via Iglau..... "	"	.....	224	2	10.53	12.10	11.40	20.58	18.41	19.20	About	same.	Exp.	lower. Or	dinar	y higher.	4th, 5.96=	$2.44 @	1.09.
via Brunn..... "	"	.....	254¼	3	7.50	12.49	11.12	**32.49**	**19.86**	22.71	Express	about	same.	Ordinary	much	higher.			
	Tots. & Avs..	.....	232	8	7.20	12.49	10.50	32.49	18.23	21.51									
VIENNA.....	Trieste.....	70,000	370	3	15.45	23.56	20.39	23.49	15.46	17.92	g. 39.07 $16.28	29.14 $11.95	....	28.26 $11.59	21.20 $8.69	14.13 $5.79	(Ex) **4.40** 3.13	(Ex) 3.23 2.35	1.57
"	Cracow.....	50,000	256½	4	9.24	18.35	13.47	27.29	13.80	18.60	23.55 $9.65	17.64 $7.23	....	19.62 $8.04	14.70 $6.03	9.79 $4.01	(Ex) **3.76** 3.14	(Ex) 2.82 2.35	1.56
Pop. 16,000 INNSPRUCK.....	Munich.....	169,000	108½	3	3.50	7.20	5.36	28.30	14.80	19.37	mks.19.25 $4.58	14.30 $3.40	....	mks.16.75 $3.99	12.20 $2.90	6.35 $1.51	(Ex) 4.22 **3.67**	(Ex) 3.14 **2.68**	**1.39**
"	Villach.....	3,500	182	1	11.47	14.26	13.06	15.44	**12.61**	**13.88**	.....	.....	.....	g. 13.68 $5.61	10.26 $4.21	6.84 $2.80	**3.08**	2.31	1.54
"	Verona.....	60,000	174½	2	9.05	12.39	10.49	18.99	13.79	16.14	mks.31.75 $7.56	23.70 $5.64	....	....	....	mks.11.35 $2.70	(Ex) 4.33	(Ex) **3.23**	1.55
via l'ressburg. VIENNA.....	Buda-Pesth...	280,000	172½	4	5.50	9.32	7.38	29.57	18.09	22.59	g. 17.21 $7.06	12.88 $5.28	....	14.31 $5.87	10.73 $4.40	7.14 $2.93	(Ex) 4.09 3.40	(Ex) 3.06 2.55	1.68
via Bruck..... "	"	.....	192	2	12.39	13.47	13.16	**15.18**	13.93	14.48									
	Tots. & Avs..	.....	182½	6	5.50	13.47	9.31	29.57	13.93	18.82									
Pop. 280,000 PESTH.....	Szegedin.....	75,000	118	3	3.42	6.06	5.11	31.89	19.34	**22.76**	11.92 $4.89	8.92 $3.66	....	9.93 $4.07	7.43 $3.05	4.95 $2.03	(Ex) 4.14 3.45	(Ex) 3.10 2.58	**1.72**

TABLE VI.—BELGIUM AND HOLLAND.

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.				*Express Rates.			*Ordinary Rates.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.		I.	II.	III.	I.	II.	III.
Pop. 183,000			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.							
BRUSSELS.....	Ostend.....	17,000	77	8 (Exps.)	2.10	4.23	3.08	**35.54**	17.57	24.61	Centimes per kilometre ..	9.58	7.09	4.72	7.66	5.67	3.78
"	Antwerp ...	149,000	27½	9	0.55	1.00	0.57	30.00	**27.50**	**28.90**	Cents per mile.....	2.96	2.19	1.46	2.37	1.75	1.17
"	Liège.....	116,000	61½	9	2.04	3.40	2.43	29.76	**16.77**	22.59	* Uniform.						
"	Luxembourg	15,000	136	3	4.51	6.34	5.55	**28.04**	20.71	22.75							
"	Charleroi ...	14,000	34	8	1.11	1.55	1.40	28.73	17.73	**20.31**							
"	Mons	24,000	38	11	1.05	2.01	1.38	32.77	18.84	23.20							
"	Lille.....	160,000	67	6	2.15	3.57	3.09	29.77	16.96	21.29							

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.				Fares.			Rates per Mile.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.		I.	II.	III.	I.	II.	III.
Pop. 296,000			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.		g.	g.	g.	cts.	cts.	cts.
AMSTERDAM	Rotterdam ..	132,000	52	12	1.39	2.52	2.15	31.52	18.14	23.03		3.75	2.85	1.85			
"	"	.....	45	7	1.15	2.19	1.37	**36.00**	19.42	27.73		$1.50	$1.14	$0.74	3.33	2.53	1.64
	Tot's & Av's.	.....	48½	19	1.15	2.52	2.01	36.00	18.14	24.55							
Pop. 132,000												5.20	4.15	2.65			
ROTTERDAM.....	Arnheim	37,000	67½	7	1.55	3.35	2.37	35.22	18.84	25.85		$2.08	$1.66	$1.06	**3.08**	**2.46**	**1.57**
"	Flushing	10,000	83	5	2.45	4.38	3.44	**30.18**	**17.86**	**22.19**		6.70	5.35	3.30			
												$2.68	$2.14	$1.32	3.23	2.58	1.59

FROM	TO	Population.	Distance.	Number of T	Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I. f. c. $ cts.	II. f. c. $ cts.	III. f. c. $ cts.	I. cts.	II. cts.	III. cts.
			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.						
Pop. 47,000 GENEVA	Brieg	1,000	128¼	2	8.00	9.25	8.36	**16.06**	13.64	14.95	25.90 $4.97	17.70 $3.40	12.95 $2.49	**3.87**	**2.64**	**1.93**
"	Berne	39,000	98¼	3	4.30	6.45	5.36	21.89	14.59	17.51	17.30 $3.32	12.35 $2.37	9.00 $1.73	3 37	2.41	1.75
Pop. 39,000 BERNE	Neuchatel	13,000	40¼	4	1.52	3.36	2.44	21.70	11.28	**14.91**	7.15 $1.37	5.20 $1.00	3.80 $0.73	3.39	2.46	1.80
"	Basle	45,000	66¼	4	3.15	3.57	3.36	20.46	16.98	18.46	10.70 $2.05	7.50 $1.44	5.35 $1.03	3.09	**2.16**	1.54
"	Thun	5,000	19¼	4	1.07	1.12	1.09	17.46	16.25	16.93	3.10 $0.59	2.20 $0.42	1.55 $0.30	**3.05**	2.17	1.52
"	Lucerne	18,000	59	3	3.19	3.40	3.28	17.79	16.17	16.99	11.00 $2.11	7.50 $1.44	5.30 $1.02	3.58	2.44	1.72
"	Zurich	21,000	81¼	4	3.45	4.48	4.10	21.73	**16.99**	**19.56**	13.30 $2.55	9.35 $1.79	6.65 $1.28	3.13	2.20	1.56
Pop. 21,000 ZURICH	Lucerne	18,000	39¼	4	2.20	2.27	2.24	16.93	16.12	16.49	6.65 $1.27	4.70 $0.90	2.35 $0.45	3.23	2.28	**1.14**
"	Coire	8,000	73¼	4	3.52	5.28	4.42	18.58	13.44	15.65	12.30 $2.36	8.65 $1.66	6.20 $1.19	3.21	2.26	1.62
"	Schaffhausen	10,000	35¼	5	1.50	2.43	2.12	19.36	13.07	16.12	5.95 $1.14	4.20 $0.81	3.00 $0.58	3.22	2.27	1.62
"	Romanshorn	?	51	6	2.00	5.01	3.18	**25.50**	**10.17**	15.42	8.75 $1.68	6.20 $1.19	4.40 $0.84	3.29	2.33	1.66
											ru. ko	ru. ko.	ru. ko.			
Pop. 668,000 ST. PETERSBURG	Riga	125,000?	464¼	2	**22.30**	**28.10**	**24.39**	**20.64**	16.49	18.85	26.29 $20.77	19.72 $15.57	16.07 $7.95	4.47	3.35	**1.71**
"	Moscow	602,000	401	6	15.00	25.15	21.46	**26.73**	**15.88**	**18.42**	23.75* $18.76	16.25 $12.84	8.68 $6.86	(Ex.) **5.42**	(Ex.) **3 69**	(Slow) 2.46 **1.71**
"	Warsaw	300,000?	692¼	3	30.03	37.17	**34.15**	23.04	**18.57**	**20.22**	39.21 $30.98	29.41 $23.23	15.04 $11.88	**4.47**	3.35	**1.71**
Pop. 300,000? WARSAW	Moscow	602,000	810¼	2	38.24	49.18	43.19	21.11	16.44	18.71	45.86 $36.23	34.48 $27.24	17.58 $13.89	4.47	**3.36**	1.71
"	Odessa	150,000?	842	2	40.32	49.25	44.09	20.77	17.04	19.07	47.66 $37.65	34.78 $27.48	18.26 $14.42	4.47	3.26	1.71
Pop. 221,000 BUCHAREST	Pesth	280,000	545	1	21.55	22.15	22.05	24.87	24.31	24.59						
"	Varna	?	184	Wed. & Sat.	12.25	12.35	12.30	14.82	14.62	14.72						

* Ex. I: 27/50 = $21.725. Ex. II: 18/75 = $14.812. 2d *slow*. 12/50 = $9.875.

TABLE VIII.—ITALY.

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			¶ Rates per Mile.					
											Express.		Ordinary.			Mixed Trains.
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I.	II.	I.	II.	III.	III.
			Miles.		h. m.	h. m	h. m.	Miles	per	Hour.	†11.00	7.7	10.00	7.00	5.00	3.9
Pop. 192,000																
TURIN	*Modane	1,000?	67	5	3.20	5.00	4.06	20.10	13.40	16.31	‡3.40	2.38	3.09	2.16	1.54	1.20
"	*Milan	200,000	93	4	3.35	5.50	5.00	25.95	15.94	18.60	‡*3.84	2.69	3.49	2.44	1.74	1.36
"	* "		114½	4	4.05	8.25	6.02	28.04	13.60	18.99						
"	*Genoa	130,000	103	7	4.02	8.00	5.54	25.54	12.87	17.48						
"	*Bologna	89,000	208	3	7.10	17.40	9.55	29.02	11.77	20.99						
"	*Brindisi	14,000	681	1	27.00	27.57	27.28	25.22	24.36	24.78						
Pop. 200,000																
MILAN	*Venice	128,000	165	4	6.15	12.43	9.36	26.40	12.97	17.18						
Pop. 130,000																
GENOA	*Nice	50,000	116	3	5.18	9.46	7.53	21.89	11.88	14.71						
"	*Pisa	25,000	104½	4	4.23	8.42	6.37	23 84	12.01	15.79						
Pop. 167,000																
FLORENCE	* "		49	5	2.03	2.50	2.25	23.71	19.60	20.19						
"	*Milan	200,000	216	3	9.35	15.47	11.43	22.54	13.68	18.44						
"	*Verona	60,000	167½	4	8.15	15.55	10.51	20.30	10.75	15.44						
"	*Venice	128,000	182	4	8.15	15.20	10.58	22.06	11.87	16.58						
"	Rome	244,000	195½	3	7.50	13.10	9.30	24.96	14.85	20.56						
"	Perugia	17,000	103	3	4.06	8.28	5.46	25.43	12.16	14.89						
"	Siena	23,000	59	3	2.54	4.24	3.20	20.34	13.41	17.68						
Pop. 244,000																
ROME	Pisa	25,000	206	2	8.15	10.55	9.18	24.97	18.87	22.13						
"	Perugia	17,000	127½	3	6.00	7.37	6.49	21.25	16.73	18.69						
"	Naples	416,000	161½	4	6.43	12.45	8.51	24.04	12.66	18.25						
"	Ancona	28,000	183	2	8.17	10.35	9.35	22.09	17.29	19.08						
Pop. 416,000																
NAPLES	Castellamare	28,000	16½	8	0.55	1.15	1.00	18.00	13.20	16.58						

N. B.—Government tax, 13%, on all fares on Alta Italia Railroad, is added in table.

* Alta Italia Railways.
† Centesimi per kilometer.
‡ Cents per mile.
¶ Uniform, except Alta Italia fares.

Fourth class fare, l. 0.85 = $0.16. Rate, 0.99.

* Alta Italia Railway.

TABLE IX.—SPAIN AND PORTUGAL.

FROM	TO	Population.	Distance.	Number of Trains.	Length of Trip.			Speed.			Fares.			Rates per Mile.		
					Fastest.	Slowest.	Average.	Fastest.	Slowest.	Average.	I. Reals.	II. Reals.	III. Reals.	I. cts.	II. cts.	III. cts.
			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.						
MADRID.....	San Sebastian..	16,000	382	2	17.05	24.23	20.41	22.36	15.66	18.59	307.00 $15.44	230.25 $11.58	138.25 $6.95	4.04	3.03	1.82
Pop. 416,000											138.50	104.00	62.50			
"	Salamanca.....	16,000	172	1	12.05	14.05	13.05	**14.23**	12.21	**13.15**	$6.97	$5.23	$3.14	4.05	3.04	1.83
"	Barcelona	216,000	441	1	21.30	21.50	21.40	20.51	**20.20**	**20.35**	353.50 $17.78	269.54 $13.56	181.80 $9.14	4.03	3.07	**2.07**
"	Carthagena	33,000	326	2	17.15	25.45	21.41	18.90	12.66	15.03	262.50 $13.20	203.44 $10.23	124.69 $6.27	4.05	3.14	1.92
"	Cordova.....	50,000	274½	3	11.40	19.50	15.45	**23.53**	13.84	17.37	221.00 $11.16	171.30 $8.62	105.00 $5.28	4.05	3.14	1.92
"	Badajos	22,000	315	2	15.24	28.30	22.14	20.45	**11.05**	14.16	253.50 $12.75	190.13 $9.56	126.75 $6.37	4.05	3.04	2.02
BARCELONA...	Perpignan	25,000	131½	2	7.47	9.45	8.39	16.90	13.49	15.20	$5.28	$3.96	$2.69	4.01	3.01	2.04
Pop. 216,000											174.80	117.20	83.60			
"	Valencia	109,000	234	2	11.30	15.42	13.35	20.35	14.84	17.22	$8.79	$5.89	$4.20	**3.75**	**2.52**	**1.80**
CORDOVA	Malaga	110,000	120	2	6.00	7.56	6.57	20.00	15.13	17.24	106.20 $5.34	79.80 $4.01	48.40 $2.43	**4.45**	**3.34**	2.03
Pop. 50,000											208.70	160.60	96.59			
VALENCIA.....	Carthagena	33,000	259½	2	17.35	20.05	19.01	14.73	12.92	13.29	$10.50	$8.08	$4.86	4.04	3.11	1.87
Pop. 109,000																
											Reis.	Reis.	Reis.			
											5,260.00	4,100.00	2,930.00			
LISBON	Badajos	22,000	164½	2	9.50	15.57	12.44	16.73	**10.31**	12.91	$5.89	$4.59	$3.28	**3.58**	**2.79**	**1.99**
Pop. 224,000											6,690.00	5,210.00	3,720.00			
"	Oporto	100,000?	209½	2	12.00	14.10	13.01	**17.46**	**14.79**	**16.09**	$7.49	$5.83	$4.17	3.58	2.79	1.99
											4,550.00	3,460.00	2,320.00			
"	Quintos	?	107½	1	8.08	8.38	8.23	**13.22**	12.45	**12.82**	$5.10	$3.87	$2.60	**4.74**	**3.60**	**2.42**

TABLE X.—NEW ENGLAND.

FROM	TO	Population.	ROUTE.	Distance.	Number of Trains.	Length of Trip.			Speed.			Common Fare.	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
						Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.						
		¶		Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.				cts.	cts.	cts.
Pop. 362,000																	
BOSTON.....	New York	1,206,000	Springfield Line....	234	4	6.33	8.23	7.29	35.72	27.91	**31.31**	$5.00	$6.00	$6.50	2 14	2.56	2.78
"	" "		Shore Line	230	3	6.53	9.43	8.04	33.41	23.67	28.50	5.00	6.00	.....	2.17	2.61	.....
"	" "		N. Y. & N. E.....	227½	2	6.33	8.13	7.34	34.77	27.72	30.25	5.00	6 00	.....	2.19	2.63	.....
"	" "		Air Line *.....	213¾	1	6.33	7.34	7.03	32.63	**28.25**	30.35	5.00	‡6.00	‡6.50	2.34	‡2.81	‡3.04
	Totals & Av'ges,	.....	.....	226‡	10	6.33	9.43	7.37	35.72	23.67	30.11						
BOSTON.....	Albany	91,000	Boston & Albany...	202	4	6.20	7.50	7.06	31.89	25.79	28.43	5.00	.....	.....	2 48	.....	.....
"	Troy	57,000	Hoosac Tunnel.....	191	3	6.05	7.20	6.45	31.40	26.05	28.30	5.00	6 00	6.50	2 62	3.14	3.40
"	Montreal.....	107,000	Lowell & Vt. Cent'l	341	2	11.35	13.50	12.50	29.44	24.65	26.57	.....	.....	.....	.....	.....	.....
"	"	.....	Air Line	335	2	12.45	14.50	13.51	26.27	22.58	24.18	11.00	13.00	13.00	**3 28**	3.88	3.88
	Totals & Av'ges,	.....	.....	338	4	11.35	14.50	13.21	29.44	22.58	25.33						
BOSTON.....	St. John, N. B..	29.000	E. & Me. Central ...	450	1	22.40	23.05	22.52	**19.85**	19.49	19.67	8.00	11.00†	11.00	**1.77**	2.44	2.44
"	Portland	34,000	Eastern	108	3	4.00	4.35	4.26	27.00	23 56	24.38	3.00	3.60	.....	2.78	3.33	.....
"	"	.....	Boston & Maine	115¼	3	4.30	4.30	4.30	25.67	25.67	25.67	.....	.....	.....	.....	.....	.....
	Totals & Av'ges,	.....	.....	111‡	6	4.00	4.35	4.28	27.00	23.56	25.03						
BOSTON.....	Concord, N. H..	14,000	Boston & Lowell ...	75	6	2.25	3.20	2.49	31.03	22.50	26.67	2.00	.....	.....	2.67	.....	.....
"	Stonington	8,000?	Boston & Prov.....	94	5	2.24	4.07	3.09	**39.17**	22.83	29.80	2 55	3.30	.....	2.71	3.51	.....
"	Newport.....	16,000	Old Colony.....	67‡	2	2.25	2.45	2.41	28.03	24.64	26.10	2.10	.....	.....	3.10	.....	.....
"	Hartford	43,000	N. Y. & N. E.....	117¼	5	3.25	5.40	4.17	34.70	20.78	27.49	3.10	.....	.....	2.63	.....	.....
Pop. 34,000																	
PORTLAND	Montreal	107,000	Grand Trunk.....	297	1	14.30	16.30	15.30	20.48	**18.00**	**19.16**	7.50	.....	.....	2.53	.....	.....
Pop. 1,206,000																	
NEW YORK.....	New Haven	63,000	N. Y., N. H. & H...	74	14	2.03	3.37	2.38	36.10	20.46	28.06	2.00	.....	.....	2.70	.....	.....

* Also four steamboat lines. Four trains daily. † And sleeping. ‡ Figures assumed, to contrast length of the most-used and the least-used route.
¶ U. S. Census, 1850.

FROM	TO	Population.	ROUTE.	Distance.	Number of Trains.	LENGTH OF TRIP.			SPEED.			Common Fare.	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
						Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.						
				Mls.		h. m.	h. m.	h. m.	Miles	per	Hour.				cts.	cts.	cts.
Pop. 1,206,000 NEW YORK ¶....	Philadelphia ..	847,000	Pennsylvania R.R.	89	18	1.50	4.15	2.36	**48.55**	20.94	**34.23**	$2.50	.....	.....	**2.78**	.....	.....
"	" ..		Bound Brook	90	9	2.10	4.45	2.46	41.54	18.95	32.46	.....	.....	.....	.....	.....	.....
	Totals & Av'ges			89½	27	1.50	4.45	2.39	48.55	18.95	33 62	.....	.....	.....	.....	.....	.....
Gray's Ferry PHILADELPHIA.	Baltimore	332,000	P., W. & B.....	96	9	2.20	4.00	3.17	**41.14**	24.00	29.22	3.00*	$4.10†	$3.06	.....	4.19	.....
Pop. 332,000 BALTIMORE.....	Washington...	147,000	Baltimore & Ohio .	40	15	0.57	1.40	1.15	42 01	**24.00**	31.79	1.20	1.45	.....	3.00	3.62	.....
"	" ...		Balt. & Potomac...	43	10	1.10	1.48	1.27	36.86	23.89	29.64	.....	.....	.....	.....	.....	.....
	Totals & Av'ges		.....	41½	25	0.57	1.48	1.20	42.01	23.89	30.85	.....	.....	.....	.....	.....	.....
Pop. 1,206,000 NEW YORK.....	Albany	91,000	N. Y. C. & H. R ..	143	8	4.00	7.30	5.06	35.75	19.07	28.00	3.10	.....	.....	2.10	.....	.....
Pop. 91,000 ALBANY	Buffalo.....	135,000	" ..	298	4	8.00	10.50	9.26	37.25	**27.51**	31.58	6.15	7.65	7.65	2.06	2.57	2.57
NEW YORK.....	"		Erie.....	421	3	13.50	16.15	14.44	31.19	25.91	28.57	9.25	.....	.....	2.19	.....	.....
"	Easton, Pa.....	12,000	N. J. Central.....	75	6	2.35	5.35	3.01	29.03	**13.45**	24.79	2.25	.....	.....	3.00	.....	.....
"	Binghamton ..	17,000	Del., L. & W.....	210	3	7.35	8.35	8.07	27 69	24.47	25.85	6.15	.....	.....	2.93	.....	.....
"	Chatham 4 Cors	3,000?	N. Y. C. & H. R...	127	2	4.40	4.55	4.46	27.21	25.83	26 62	2.75	.....	.....	2.17	.....	.....
ALBANY.....	Binghamton ..	17,000	Del. & H. Canal...	142	3	5.20	6.50	6.01	26.62	20.77	23.61	4.25	5.25	6.25‡	2.99	3.70	4.40
Pop. 12,000 ROME.....	Ogdensburg...	10,000	R., W. & O.....	142	2	6.40	7.00	6.51	**21.30**	20.29	**20.72**	4.30	.....	.....	3.03	.....	.....
Pop. 847,000 PHILADELPHIA.	Pittsburg	156,000	Pennsylvania.....	354	6	9.50	14.15	11.40	36.00	24.84	30.36	10.00	.....	.....	2.82	.....	.....
" .	Atlantic City..	5,000?	Camden & Atl.....	58	3	1.50	2.25	2.10	31.64	24.00	26.84	1.00	1.25	.....	**1.72**	2.16	.....
" .	Pottsville.....	13,000	Phil. & Reading...	93	5	2.50	4.25	3 37	32.89	21.06	25.66	2.80	.....	.....	3 01	.....	.....
" .	Bethlehem	12,000	" ...	54	7	1.40	2.10	2.00	32.40	24,92	26.97	1.50	.....	.....	2.78	.....	.....
Pop. 332,000 BALTIMORE.....	Harrisburg	31,000	Baltimore & Ohio .	88	4	2 45	3.45	3.19	32.00	23.47	26.57	2.64	.....	4.64	3 00	.....	5.27
"	Parkersburg ..	7,000	"	384	2	12.45	14.50	14.04	30.12	25.89	27.31	10.00	12.00	12.00	2.60	3.12	3.12
Pop. 156,000 PITTSBURG	Cumberland...	11,000	"	150	2	5.06	5.43	5.22	29.41	26.24	27.93	5.20	.....	.....	**3.47**	.....	.....

* Fare to Pres. St.; to Charles St., 25 cents extra. † Limited express. ‡ Seats in sleeping car, 75 cents; berths, $2.00. ¶ Jersey City.

TABLE XII.—WESTERN STATES.

FROM	TO	Population.	ROUTES.	Distance.	Number of Trains.	Length of Trip. Fastest.	Slowest.	Average.	Speed. Highest.	Lowest.	Average.	Common Fare.	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
Pop. 135,000				Miles.		h. m.	h. m.	h. m.	Miles.	per	Hour.				cts.	cts.	cts.
BUFFALO	Toledo	50,000	L. S. & M. S.	296	5	8.15	13.20	10.26	**35.89**	22.20	28.35	$8.25	$9.75	$10.25	2.79	3.29	3.46
Pop. 503,000																	
CHICAGO	"		" "	243	5	7.05	11.30	8.58	34.31	21.13	27.11	7.00	8.00	8.50	2.88	3.29	3.50
CHICAGO	Detroit	116,000	Mich. Cent.	284	5	8.20	11.50	10.25	34.08	24.00	27.24						
"	"		L. S. & M. S.	284	2	9.55	15.15	11.57	28.64	**18.62**	23.73	8.00	2d class. $6.00	10.00	2.82	2d class. 2.11	3.52
	Totals and Averages			284	7	8.20	15.15	10 52	34.08	18.62	26.14						
Pop. 503,000																	
CHICAGO	Pittsburg	156,000	Penn.	468	4	14.30	21.40	18.49	32.28	21.60	24.86	14.00			2.99		
CHICAGO	Omaha	31,000	C., R. I. & P.	503	2	21.20	23.20	22.06	23.58	21.56	22.76	16.00			3.18		
"	"		C., B. & Q.	501	2	21.00	22.15	21.42	23.86	22.52	23.08	16.00			3.19		
"	"		C. & N. W.	491	2	21.25	24.00	22.25	22 93	20.46	21.90	16.00	2d class. $13.00	19.00	3.26	2d class. 2.65	3.87
	Totals, Averages, etc.			498½	6	21.00	24.00	22.05	23.86	20.46	22.57						
CHICAGO	St. Louis	350,000	C. & A.	283	2	11.00	11.40	11.17	25.73	24.26	25.06	8.70			3.07		
"	"		W., St. L. & P.	285	2	10.40	11.30	11.04	26.72	24.78	25.76						
"	"		Ill. Cent.	299	2	11.40	12.20	11.59	25.63	23.61	24.96						
	Totals and Averages			289	6	10.40	12.20	11.27	26.72	23.61	25.25						
CHICAGO	Kansas City	56,000	C. & Alton	487	2	19.35	25.10	22.29	24.82	19.35	21.66	14.90?		17.90?	3.06?		3.68?
"	"		C., B. & Q., H. & St. Jo.	489	2	19.20	24.45	22.00	25.30	19.76	22.23						
"	"		C., R. I. & P.	529	2	20.00	24.00	22 16	26.45	22.04	23.75						
	Totals and Averages			501¾	6	19.20	25.10	22.15	26.45	19.35	22.55						

CHICAGO	Cincinnati	256,000	C., I., St. L. & Chic.	310	2	10.50	12.00	11.31	28.62	25.83	26.91	$9.00	$10.00	$11.00	3.06	3.40	3.74
"	Columbus	52,000	P., C. & St. L.	314	1	12.00	13.05	12.32	26.17	24.00	25.04	10.05			3.20		
"	Nashville	43,000	Chic. & E. Ill.	442	1	22.35	23.40	23.07	**19.72**	18.68	**19.18**	3 dys. 14.50	1st unlim. † 16.85		3.28	1st unlimit'd 3 81	
"	Cairo	10,000?	Ill. Cent.	365	2	14.20	19.25	16.30	25.47	18.80	22.12	12.00			3.29		
Pop. 256,000																	
CINCINNATI	St. Louis	350,000	Ohio & Miss.	340	2	10.10	12.10	11.29	33.44	**27.95**	**29.62**	10.00	11.00	11.00	2.94	3.23	3.23
"	Louisville	124,000	* L., C. & D.	110	3	4.10	4.40	4 26	26.40	23.57	24.83	4.00			3 63		
"	Toledo	50,000	Cinc., Ham. & D.	202	2	7.35	8.20	8.00	26.64	24.24	25.20	5.95			2.95		
"	Cleveland	160,000	C., C., C. & Ind.	245	3	7.20	10.40	9.17	33.41	22.97	26 37	7.30			3 00		
"	Pittsburg	156,000	P., C. & St. L.	313	3	10.50	11.35	11.22	28.89	27.02	27.55	9.60		11.60	3.07		3.71
"	Parkersburg	7,000	Mar. & Cinc.	205	3	6.30	9.10	7.54	31.54	22.36	25.94	6.05			2.95		
Pop. 50,000																	
TOLEDO	St. Louis	350,000	W., St. L. & P.	436	2	14.18	19.55	15.57	30.49	21.89	27.34						
Pop. 52,000																	
COLUMBUS	Indianapolis	75,000	P., C. & St. L.	188	3	6.00	8.00	7.18	31.33	23.50	25.76	5.35		7.35	2.84		3 91
Pop. 350,000																	
ST. LOUIS	Indianapolis		Vandalia	240	2	7.35	9.35	8.40	31.65	25.04	27.69	8.00			3.33		
"	"		Ind. & St. L.	261	2	8.50	11.00	10.02	29.55	23.73	25.99						
	Totals, Averages, etc.			250¼	4	7.35	11.00	9.19	31.65	23.73	26.78						
ST. LOUIS	Atchison	15,000	Miss. Pac.	330	2	13.48	14.43	14.24	23 91	22.42	22.92	9.50			2.88		
"	Kansas City	56,000	W., St. L. & P.	277	2	11.15	11 45	11.27	24.62	23.57	24.19						
"	Council Bluffs	18,000	W., St. L. & P.	410	2	14.45	20.55	17.37	27.80	19.60	23.26	12.75		15.25	3.11		3.72
"	Rock Island	12,000	C., B. & Q.	247	2	11.30	12.30	12.04	21.48	19.76	20.47	9.00			3.64		
Pop. 75,000																	
INDIANAPOLIS	Louisville	124,000	J., Mad. & I.	110	3	3.45	4.20	4.05	29.33	25.38	26.94	4.50			**4.09**		
Pop. 156,000																	
PITTSBURG	Cleveland	160,000	C. & P.	150	2	5.45	6.35	6.07	26.09	22.78	24.49	4.00	4.75	5.50	**2.67**	3.17	3.67

*** There is also a somewhat inefficient line via Ohio and Mississippi.**

† Second class $12.75. Rate 2.88.

TABLE XIII.—SOUTHERN STATES.

FROM	TO	Population.	ROUTE.	Distance.	Number of Trains.	Length of Trip.			Speed.			Common Fare.	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
						Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.						
				Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.				cts.	cts.	cts.
Pop. 147,000																	
WASHINGTON...	Richmond.....	64,000	Rich., F. & Pot.....	136	2	4.30	4.55	4.45	**30.22**	**27.66**	**28.63**	$5.75	.....	.....	4.23	.....	.....
RICHMOND	Weldon	300?	Rich. & P.; & P.....	86	1	3.20	3.29	3.24	25.80	24.69	25.23	4.50	$5.00	$6.50	**5.23**	5.81	7.56
WELDON.....	Wilmington,NC	17,000	Wilmington & W.....	162	2	6.00	7.10	6.18	27.00	22.60	25.12	.....	.....	.....	.....	.....	.....
WILMINGTON..	Charleston, S.C.	50,000	Wil., Col. & A.; N.E..	210	2	8.45	9.35	9.05	24.00	21.90	23.10	8.40	9.15	10.40	4.00	4.36	4.95
CHARLESTON..	Savannah, Ga...	31,000	Ch. & Savannah.....	115	2	5 20	11.15	8 21	21.56	10.22	13.77	5.00	.....	.....	4.34	.....	.....
SAVANNAH....	Jacksonville, Fl.	14,000	Florida Central.....	261	1	15.20	15.30	15.25	17.02	16.84	16.93	8.40	.....	.....	3.22	.....	.....
WILMINGTON...	Columbia, S. C.	10,000	W., C. & A.....	189	1	7.42	8.30	8.06	24.55	22.24	23.33	.....	.....	.....	.....	.....	.....
COLUMBIA.....	Augusta, Ga....	23,000	Charlotte, C. & I.....	85	2	3.57	4.30	4 08	21.54	18.89	20.56	.....	.....	.....	.....	.....	.....
AUGUSTA.....	Macon, Ga	13,000	Georgia	125	2	8.47	13 00	10.44	14.23	**9.69**	**11.64**	5.00	.....	6.50	4.00	.....	5.20
MACON.....	Columbus, Ga..	10,000	S. Western, Ga.....	100	2	5.30	7.01	6.15	18.18	14.25	16.00	4.00	.....	.....	4.00	.....	.....
COLUMBUS.....	Montgomery ...	17,000	Western. Ala.....	95	2	4.15	9.30	6.26	22.35	10.00	14.76	4.30	.....	.....	4.53	.....	.....
MONTGOMERY..	Mobile.....	31,000	Louisville & N.....	180	2	6.45	7.40	7.05	26.67	23.48	25.41	9.00	.....	11.00	5.00	.....	6.11
MOBILE.....	New Orleans...	197,000	Louisville & N.....	141	2	5.05	5.5	5.20	27.74	24.17	26.44	7.00	.....	9.00	4.96	.....	6.38
WASHINGTON ..	N. Danville, Va.	10,000?	W. C.,Va. M.,& Gt. S.	244	2	9 35	10 30	10.04	25.46	23.24	24.25	7.50	*9.50	9 50	3.07	3.89	3.89
DANVILLE.....	Charlotte, N. C.	7,000?	Rich. & D	141	2	4.59	6.34	5.45	28.29	21.47	24.54	5.20	5.70	7.20	3 69	4.04	5.11
CHARLOTTE.....	Atlanta, Ga. ...	34,000	Atlanta & Ch.....	267	2	10.45	11 50	11.33	24.84	22.56	23.11	12.50	.....	.....	4.68	... ..	.....
ATLANTA	Montgomery ...	17,000	A. & W. Pt.; & W. Ala	175	2	6.45	7.00	6.54	25.93	25.00	25.38	7.40	8.40	9.40	4.23	4.80	5.37
COLUMBIA	Charleston, S. C.	50,000	South Carolina.....	131	2	5.10	10.00	7.24	25.35	13.10	17.70	†5.20	.....	6.70	3.97	.....	5.11
Pop. 34,000																	
ATLANTA.....	Savannah.....	31,000	Central, of Georgia...	295	2	15.25	18.20	17.01	19.14	16.09	17.33	12.15	.....	.....	4.12	.....	.....
"	Chattanooga ...	13,000	Atlanta & Chat.....	138	2	5.30	5.40	5.35	25.09	24.35	24.72	7.20	.....	.....	5.22	.....	.....
Pop. 13,000																	
CHATTANOOGA.	Nashville	43,000	N. Chat. & St. L.....	151	2	5.45	6 45	6.14	26.26	21.63	24.24	7.55	.....	.....	5.00	.....	.....
Pop. 256,000																	
CINCINNATI.....	Chattanooga	13,000	Cinc. Sou'n	335	2	11.20	13.40	12.20	29.56	24.51	26.49	6.70	.....	.....	**2.00**	.....	.....
Pop. 13,000																	
CHATTANOOGA.	Bristol, Va.....	1,000?	E. Tenn., Va. & Ga...	242	2	9.10	13.20	10.59	26.40	18.15	22.04	12.10	.....	.....	5 00	.....	.....
"	Memphis.....	34,000	M. & Chat.....	310	2	12.10	13 50	13.14	25.48	22.41	23.28	15.50	.....	.....	5.00	.....	.....
Pop. 124,000																	
LOUISVILLE.....	Memphis.....	34,000	Louisville & N.....	377	2	15.40	18.05	16.35	24.06	20.85	22.73	11.30	.....	14.30	3 00	.....	3.79
"	Nashville	43,000	Louisville & N.....	185	2	6.15	7.50	7.04	29.60	23.62	26.19	6.50	.....	8.50	3.51	.....	4.59
Pop. 43,000																	
NASHVILLE.....	Montgomery....	17,000	Louisville & N.....	305	2	11 35	12.40	12 05	26.33	24.08	25.24	13.10	.....	15.10	4.29	.....	**4.95**
Pop. 31,000																	
MOBILE.....	Columbus, Ky..	5,000	Mobile & Ohio.....	472	1	18.35	20.00	19.17	25.40	23.60	24.46	16.00	.....	.....	3.39	.....	.....
Pop. 197,000																	
NEW ORLEANS..	Cairo, Ill.....	10,000?	Great Jackson	550	2	25.00	27 45	26.11	22.00	19.82	21.00	17.50	.....	.....	3.18	.....	.....
"	Vermilionville...	2,000?	Morgan's La. & Texas	144	2	6.53	8.55	7.46	20.92	16.15	18.55	7.20	.....	17.70	5.00	.....	5.35
Pop. 64,000																	
RICHMOND, Va...	W.Sulphur Sp's	200?	Chesapeake & Ohio...	227	2	10.35	12.25	11.12	21.45	18.23	20.00	7.10	none.	8 10	3.13	.....	3.57

TABLE XIV. (A.) NORTH AND NORTHWESTERN. (B.) SOUTHWESTERN.

FROM	TO	Population.	Routes.	Distance.	Number of Trains.	Length of Trip.			Speed.			Common Fare.	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
						Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.						
(A.)				Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.				cts.	cts.	cts.
CHICAGO..... Pop. 503,000	St. Paul	41,000	C., & N. W.....	409	2	16.30	20.00	18.44	24.79	20.45	21.83	$14.00	.....	$16.00	3.42	.....	3.91
"	"	.....	C., M. & St. P.....	409	2	16.25	19.55	18.39	24.91	20.54	21.93	.....	.....	.....	.....	.....	.....
	Totals & Av'ges,	.....	.....	409	4	16.25	20.00	18.41	24.91	20.45	21.88						
CHICAGO.....	Milwaukee.....	116,000	C., M. & St. P.....	85	4	2.45	3 15	3.01	**30.91**	**26.15**	**28.14**	3.00	$3.35	.....	3.53	3 94	.....
"	"	.....	C. & N. W.....	85	4	2.45	3.35	3.04	30.91	23.72	27.76	.....	.....	.....	.....	.....	.....
	Totals & Av'ges,	.....	.....	85	8	2.45	3.35	3.02	30.91	23.72	27.95						
ST. PAUL..... Pop. 41,000	Duluth.....	10,000?	St. P. & D.....	155	1	8.00	8.15	8.07	19.37	18.79	19.08	6.00	.....	.....	3.87	.....	.....
"	Sioux City	7,000	S. C. & St. P.....	270	2	12.05	12.45	12.31	22.34	21.18	21.56	10 80	.....	.....	**4.00**	.....	.....
"	Bismarck	3,000?	Northern Pacific...	469	1	24.15	24.40	24.27	19.34	19.01	19.17	12.85	13.85	14.85	**2.74**	2.95	3.17
"	St. Vincent.....	25 !	St P., M & M.....	390	1	21.15	21.45	21.30	18.35	17.93	18.14	15.50	.....	19.00	3.97	.....	4.87
MILWAUKEE.... Pop. 116,000	Ashland	2,000?	Wisconsin Central.	351	2	21.40	52.20	35.35	**16.40**	**6.66**	**9.86**	13.70	.....	.....	3.90	.....	.....
"	Marquette.....	10,000?	C. & N. W.....	316	1	14.45	14.55	14.50	21.42	21.18	21.30	12.10	.....	14.60	3.83	.....	4.62
DETROIT ..... Pop. 116,000	Grand Haven ..	10,000?	D., G. H. & M.....	189	2	7.15	8.30	8.01	26.07	22.24	23.56	5.70	.....	.....	3.00	.....	.....
(B.)																	
ST. LOUIS..... Pop. 350,000	Columbus, Miss.	5,000	St. L., I. M. & Sou.	196	2	10.25	11.35	11.09	18.82	16.91	17.58	6.75*	.....	8.75	**3.44**	.....	4.46
"	Little Rock	13,000	"	345	2	15.50	16.40	16.20	21.79	20.70	21.12	14 35	.....	16.85	4 16	.....	4.88
"	Vinita	1,000?	St. L. & St. Fr'co..	363	1	15.58	16.10	16.04	**22.71**	**22.46**	**22.59**	13.40	.....	.....	3.69	.....	.....
GALVESTON..... Pop. 22,000	San Antonio ...	21,000	G., H. & San Anto.,	216†	2	10.05	15.10	12.37	21.42	14.24	17.11	11.95	.....	13.45	**7.20**	.....	8.10
"	Denison.....	10,000?	M., K. & Texas....	388	2	20.15	21.20	20.46	19.16	18.19	18 68	18.90	.....	21.90	4.87	.....	5.64
"	Longview	1,000?	Int'l & Gt. N.....	282	1	17.10	22.40	19.55	**16.43**	12.47	14.15	14.10	.....	.....	5.00	.....	.....
EASTLAND, Tex., Pop. ?	Longview	1,000?	Texas & Pacific....	295	1	16.00	16.00	16.00	18.42	18.42	18.42	.....	.....	.....	.....	.....	.....
MEMPHIS..... Pop. 34,000	Little Rock.....	13,000	M. & L. R.	135	2	8.05	12.30	10.15	16.70	**10.80**	**13.17**	6.15	.....	8.15	4 56	.....	6.04

* Unlimited fare, $7.05, rate, 3.60c. † Fares from Houston, 166 miles.

TABLE XV.—FAR WEST.

FROM	TO	Population.	ROUTE.	Distance.	Number of Trains.	Length of Trip.			Speed.			Common Fare.	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
						Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.						
Pop. 15,000				Mls.		h. m.	h. m.	h. m.	Miles	per	hour.				cts.	cts.	cts.
ATCHISON.....	Pueblo.....	10,000?	A. T. & Santa Fe .	618	2	26.20	28.05	27.16	23.47	22.00	22.59	$27.00	.....		4.37	.....	
Pop. ——?																	
LA JUNTA.....	San Marcial...	——?	"	451	1	26.10	26.30	26.20	17.23	17.02	17.12	39.05	.....	$43.55	8.66	.....	9.66
Pop. 15,000																	
ATCHISON.....	Cawker City..	3,000?	Miss. Pac.....	202	2	10.18	19.58	15.05	19.61	10.11	13.39	8.10	.....	.....	4.00	.....	.....
Pop. 56,000																	
KANSAS CITY ..	Denver.....	36,000	Union Pacific.....	639	2	30.05	31.35	30.55	21.24	20.23	20.64	27.00	.....	.....	4 23	.....	.....
" ..	Omaha, U.P.Tr	31,000	K. Cy., St.J. & C.B.	203	2	8.05	8.35	8.19	**25.11**	**23.65**	**24.42**	6.05	.....	.....	**3.00**	.....	.....
Pop. 31,000.....																	
OMAHA.....	Cheyenne	4 000	Union Pacific.....	516	2	23.50	47.10	34.54	21.65	10.94	14.79	22.00	.....	.....	4 26	.....	.....
CHEYENNE.....	Ogden.....	10,000?	"	517	2	28.35	53.20	39.22	18.09	9 69	**13.13**	38.00	.....	.....	7.35	.....	.....
OGDEN	Winnemucca..	2,000?	Central Pacific	420	2	18.45	39.45	29.21	23.01	10.56	14 29	31.25	.....	34.25	7.44	.....	8.15
WINNEMUCCA ..	Sacramento ...	21,000	"	324	1	18.00	20.10	19.05	18.00	16.07	16.98	25.50	.....	28.50	7.87	.....	8.80
SACRAMENTO...	San Francisco.	234,000	"	90	3	3.45	4.15	4.01	24.00	21.18	22.42	4.00	.....	.....	4.44	.....	.....
Pop. 4,000																	
CHEYENNE	Denver.....	36,000	Union Pacific.....	138	2	6.30	13.30	10.00	21.23	10.22	13.80	7.00	.....	.....	5.07	.....	.....
Pop. 36,000																	
DENVER	Pueblo.....	10,000?	D. & Rio G.....	118	2	5.32	5.38	5.35	21.33	20.95	21.13	10.00	.....	.....	8.47	.....	.....
Pop. 10,000?																	
OGDEN	Dillon.....	——?	Union Pacific.....	350	1	24.00	24.10	24.05	**14.58**	14.48	14.53	25.00	.....	.....	7.14	.....	.....
"	Salt Lake City	21,000	Utah Central.....	37	3	2.00	3.15	2.24	18.50	11.38	15.40	2.00	.....	.....	5.41	.....	.....
Pop. 234,000																	
SAN FRANCISCO	Los Angeles ..	11,000	Southern Pacific ..	471	1	21.55	23.20	22.37	21.49	20.19	20.82	23.00	.....	25 50	4.88	.....	5.41
LOS ANGELES ..	Rio Mimbres..	——?	" ..	716	1	46.45	50.50	48.47	15.32	14.08	14.77	.....	.....	.....	.....	.....	.....
Pop. 21,000																	
SACRAMENTO...	Redding	1,000?	California Pacific..	169	2	6.45	19.00	12.41	25.04	**8.89**	13.32	10.25	.....	.....	6.07	.....	.....
Pop. 21,000																	
PORTLAND, Or..	Roseburg	1,000?	Oregon & Califor'a	200	1	11.25	11.30	11.27	17.52	17.39	17.45	.....	.....	.....	.....	.....	.....
Pop. 36,000																	
DENVER.....	Leadville	15,000	D., So. P. & Pac...	171	2	11.30	12.45	11.53	14.87	13.41	14 40	15.00	.....	17.00	**8.77**	.....	9.94

TABLE XVI.—CANADA, ETC.

FROM	TO	Population.	Routes.	Distance.	Number of Trains.	Length of Trip.			Speed.			Common Fare	Parlor Car Fare.	Sleeping Car Fare.	Common Rate.	Parlor Car Rate.	Sleeping Car Rate.
						Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.						
				Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.				cts.	cts.	cts.
Pop. 107,000 MONTREAL	Detroit	116,000	Grand Trunk	564	2	22.52	25.37	24.17	24.67	22.02	23.22	$ 15.70			2.78		
Pop 116,000 DETROIT	Buffalo	135,000	Canada Southern,	256	3	8.00	8.50	8.27	**32.00**	**28.98**	**30.32**						
"	"		Grand Trunk	258	2	9.10	11.55	10.04	28.15	21.65	25.33						
"	"		Great Western	253	4	8.10	10.36	9.29	30.98	23.87	26.68	7.00			2.77		
	Totals & Av'ges,			255¾	9	8 00	11.55	9.16	32.00	21.65	27.54						
Pop. 107,000 MONTREAL	Quebec	75,000	Q., M., O. & Occ'l,	173	2	6.00	9.00	7.24	28.83	19.22	23.39	4.50*	$5.25	$6.00	2.60	3.04	3.46
"	Newport	200	Southeastern	99	2	4.20	5.20	4.52	22.85	18.56	20.41	3.90	4.40	5.90	**3.94**	4.44	5.95
"	Rouse's Point	1,000?	Grand Trunk	50	2	1.50	2.10	2.02	27.27	23.08	24.49	1.95			3.90		
Pop. 15,000 OTTAWA	Brockville	10,000?	Canada Central	75	2	3.00	3.40	3.14	25.00	20.45	23.23	2.50			3.33		
Pop. 70,000 TORONTO	Collingwood	5,000?	N. & N. W.	95	3	4.30	6.15	4.59	21.11	15.20	19.05	2.85			3.00		
Pop 30,000 HALIFAX	Point Levi	25?	Intercolonial	480	1	26.50	27.00	26.55	17.89	17.78	17.84	14.20	2d class. 9.47		2.96	2d class. 1.97	
"	St. John	29,000	"	276	2	11.25	12.05	11.46	24.17	22.84	23 45	6.00	2d class. 4.00		**2.17**	2d class. 1.45	
"	Annapolis	1,000?	Windsor&Annap.	129	2	5.55	10.00	7.57	21.80	12.99	16.21	3.75			2.91		
Pop. 2,000? ST. ANDREW'S	Houlton	2,000?	N. B. & Canada	90	1	9.00	9.20	9.10	**10.00**	**9.64**	**9.82**						
Pop. 8,000? CHARLOTTETOWN	Georgetown	1,000?	P. E. I. R. R	46	2	2.44	3.50	3.18	16 83	12.00	13.90						
" [P. E. I.	Tignish	150?	"	118	2	6.15	10.05	8.16	18.88	11.70	14.29						

* Summer fare, 1st class, $3.00, rate 1.73c.; 2d class, $1.50, rate .87c.! 2d class in rest of year, $3.00; rate, 1.73c.

TABLE XVII.—LONDON TO CONTINENT.

LONDON TO PARIS. Route.	Distance. On land / total.	Number of Trains.	Trips. Fastest. On land / total.	Trips. Slowest. On land / total.	Trips. Average. On land / total.	Speed. Highest. On land / total.	Speed. Lowest. On land / total.	Speed. Average. On land / total.	Express Fares. I.	Express Fares. II.	Ordinary Fares. I.	Ordinary Fares. II.	Ordinary Fares. III.	Rate per Mile. Express. I.	Rate per Mile. Express. II.	Rate per Mile. Ordinary. I.	Rate per Mile. Ordinary. II	Rate per Mile. Ordinary. III.
	Miles.		h. m. h. m.	h. m. h. m.	h. m. h. m.	Miles	per	Hour.	s. d. $ cts.	s. d. $ cts.	s. d. $ cts.	s. d. $ cts.	s. d. $ cts.	cts.	cts.	cts.	cts.	cts.
Cannon St. to Dover	76½ / 261	3	1.42 / 6.42	3.05 / 11.20	2.08 / 8.32	45.00 / 39.15	24.81 / 23.03	35.78 / 30.61										
Dover to Calais	21½ / —		1.30 / —	2.55 / —	1.49 / —	14.33 / —	7.37 / —	11.82 / —	60/	45/	.....	31/6	21/	....	....	....	....	....
Calais to Paris	184½ / 282¼		5.00 / 10.00	8.40 / 18.20	6.23 / 12.37	36.90 / 28.25	21.29 / 15.43	28.88 / 22.34	$14.55	$10.81	.....	$7.64	$5.09	5.16	3.86	....	2.74	1 80
Cannon St. to Folkestone	71½ / 229½	2	1.50 / 6.05	3.20 / 10.40	2.32 / 8.25	39.00 / 37.73	21.45 / 21.52	28.13 / 27.27										
Folkestone to Boulogne	28 / —		1.30 / —	2.00 / —	1.45 / —	18.66 / —	14.00 / —	16.00 / —	56/	42/	.....	31/6	21/	....	....	....	....	....
Boulogne to Paris	158 / 257¼		4.15 / 8.05	7.30 / 22.38	5.52 / 13.15	37.18 / 31.86	21.60 / 11.38	26.89 / 19.43	$13.58	$10.18	.....	$7.64	$5.09	5.27	3.95	....	2.97	1.98
London Br. to Newhaven	55 / 180	1	1.43 / 5.34	1.43 / 8.00	1.43 / 6.46	32.04 / 32.33	32.04 / 22.50	32.04 / 26.61										
Newhaven to Dieppe	64 / —		5.00 / —	5.00 / —	5.00 / —	42.80 / —	42.80 / —	42.80 / —	.....	.....	33/	24/	17/	....	....	....	....	....
Dieppe to Paris	125 / 244		3.51 / 12.45	6.15 / 20.10	5.03 / 16.27	42.47 / 19.14	20.00 / 12.10	25.00 / 13.55	.....	.....	$8.00	$5.82	$4.12	....	....	3.28	2.38	1.69
Totals and Averages	67.66 / 223.5	6	1.42 / 5.34	3.20 / 11.20	2.12 / 8.12	45.00 / 39.15	21.45 / 21.52	32.35 / 28.87	.....	.....	.....	.....	.....	....	....	....	....	....
	37.83 / —		1.30 / —	5.00 / —	2.20 / —	18.66 / —	7.37 / —	13.30 / —										
	155.83 / 261.33		3.51 / 8.05	8.40 / 22.38	6.00 / 13.28	37.18 / 31.86	21.60 / 11.38	27.72 / 19.50	.....	.....	.....	.....	.....	....	....	....	....	....
London to Southampton	78½ / 220¼	½†	19.35	20.45	20.10	31–32 land	30 ? land.	31 on land.										
Southampton to Havre	?80½ / —					15–16 total.	15 ? total.	15 total.	.....	.....	33/	24/	.....	....	....	....	....	....
Havre to Paris	141½ / 300								.....	.....	$8.00	$5.82	.....	....	....	2.67	1.94	....
London to Weymouth	160 / 390	1	24.00	26.00	25.00	27 ? land.	27 ? land.	27 ? land.	.....	.....	.....	.....	.....	....	....	....	....	....
Weymouth to Cherbourg	?60 / —					19 ? total.	18 ? total.	18 ? total.	.....	.....	.....	.....	.....	....	....	....	....	....
Cherbourg to Paris	230½ / 450								.....	.....	.....	.....	.....	....	....	....	....	....
Via Thames to Boulogne	118 / 158	1 ?	14. ?	17. ?	15.30 ?	37.18 ? land.	21.60 ? land.	30 ? land.										
Boulogne to Paris	158 / 276					20. ? total.	16 ? total.	18 ? total.	.....	.....	27/	19/6	16/6	....	....	2.42	1.71	1.45
											$6.67	$4.73	$4.00					
* Totals and Averages	.....	8½	1.42 / 5.34	5.30 / 14.30	.....	45.00 / 39.15	21.45 / 21.52	.....	.....	.....	.....	.....	.....	....	....	....	....	....
			1.30 / —	12.00 / —		18.66 / —	7.37 / —											
			3.51 / 8.05	9.00 / 26.00	.....	37.18 / 31.86	21.60 / 11.38	.....	.....	.....	.....	.....	.....	....	....	....	....	....

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TABLE XVIII.—INTERNATIONAL EUROPEAN ROUTES not elsewhere given analytically.

FROM	TO	Distances.	Number of Trains.	Length of Trip.			Speed.			Fares.			Rates per Mile.		
				Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.	I.	II.	III.	I.	II.	III.
		Miles.		h. m.	h. m.	h. m.	Mls.	per	Hour				cts.	cts.	cts.
Via Rotterdam and Hanover															
LONDON	Berlin	603½	1	26.11	33.44	29.59	23.05	17.89	20.14	sh. 87.2 $21.14	sh. 61.9 $14.97		3.50	2.48	
Via Brussels, Etc.		av. 732½								120.0	105.0				
LONDON	"	726½	3	24.51	34.48	30.13	29.25	20.89	24.11	$29.22	$25.58		3.95	3.48	
Via Flushing and Magdeburg															
LONDON	"	699½	1	24.41	34.49	29.45	28.34	20.90	23.51	Same as	via Rotterdam.				
Via Magdeburg.										f. c.	f. c.				
PARIS	Berlin	670	2	21.29	23.38	22.34	31.19	28.35	29.68	Same as	below.				
Via Hanover.										126.0	92.25				
PARIS	"	664½	2	21.59	23.06	22.37	30.23	28.77	29.37	$24.19	$17.71		3.64	2.66	
Via Turin and Civita Vecchia.															
PARIS	Rome	912½	1	38.55	40.05	39.30	23.45	22.76	23.10	184.60 $35.44	133.20 $25.57		3.88	2.80	
Via Turin and Florence.												97.25			
PARIS	"	983	2	42.05	43.40	42.57	23.36	22.51	22.88	Slightly	higher?	$18.67			1.90
Via Marseilles and Nice.															
PARIS	"	1101	1	40.45	43.35	42.10	27.02	25.26	26.11						
											mks.	mks.		-	
Via Salzbergen.															
BERLIN	Rotterdam	413	2	13.44	24.16	17.59	30.08	17.02	22.97	*	41.70 $9.92	27.10 $6.45	ex. 3.50	ex. 2.67 2.40	1.56
Via Emmerich.															
BERLIN	"	442	2	12.51	21.39	16.00	34.40	20.42	27.62	Same	all	through.			
Via Dresden.															
BERLIN	Vienna	439	3	15.42	25.08	20.41	27.96	17.47	21.22	Slightly	higher!				
Via Breslau.															
BERLIN	"	503	2	17.07	20.32	19.14	29.39	24.50	26.16	fl. 33.30 $13.65	26.00 $10.66		2.71	2.01	
Via Görlitz.															
BERLIN	"	428	1	21.02	23.42	22.22	20.35	18.06	19.13	mks.65.40 $15.56	49.20 $11.71		3.64	2.74	

* Ex. I. mks. 60.60 = $14.47⁰. Ex. II. mks. 46.40 = $11.068.

TABLE XIA.—Intersectional American Routes not elsewhere given Analytically.

FROM	TO	ROUTES.	Distance.	Number of Trains	Length of Trip.			Speed.		
					Fastest.	Slowest.	Average.	Highest.	Lowest.	Average.
			Miles.		h. m.	h. m.	h. m.	Miles	per	Hour.
NEW YORK	Chicago	Penn	902	4	29.10	36.55	34.04	30.93	24.43	26.48
"	"	N. Y. C.; L. S. & M. S.	980	3	33 05	36.35	35.20	29.62	26 79	27.73
"	"	Erie	961	3	29 35	37.55	35.31	32.49	25.34	27.06
NEW YORK	Cincinnati	Penn	757	3	24.30	27.00	26 02	30.90	28.04	29.08
"	"	B. & O	777	2	26.34	33.46	29.34	29 25	23.01	26.28
"	"	Erie; Atl. & Gt. W	862	2	32.44	35.36	33 44	26.33	24.21	25.56
NEW YORK	St. Louis	Penn.; Vandalia	1,065	2	35.03	38.52	37.15	30.39	27 40	28.59
"	"	N. Y. C.; W., St. L. & P.	1,173	2	36.55	48.35	40.55	31.77	24 35	28.67
"	"	Balt. & O.; O. & M.	1,117	2	37.15	46.15	42.15	29.99	24.15	26.44
"	"	I. & St. L.; N. Y. C.	1,168	2	38.48	47.03	42.56	30.10	24.82	27.20
NEW YORK	New Orleans	Pied. Air Line	1,395	2	54.41	60.44	57.50	25.51	22.97	24 12
"	"	Atlantic Coast Line	1,526	1	60.06	60.44	60.25	25.39	25.13	25.26
CHICAGO	Cincinnati	P., C. & St. L.	294	1	12.10	13.20	12.45	24.16	22.05	23.06
ST. LOUIS	New Orleans	Great Jackson	700	1	34 24	35.21	34.52	20.35	19 80	20.07
"	"	St. L., I. M. & S.; M. & O.	725	1	36 34	37 36	37.06	19.83	19.28	19 55
ST. LOUIS	Cincinnati	Vandalia	355	2	11.51	14.44	13.01	29.96	24.09	27 26
ST. LOUIS	Galveston	Int'l & Gt. N.	870	1	46 17	50.23	48.20	18 80	17.27	18.00
"	"	St. L. & San F.	960	1	49.12	51.56	50.34	19.51	18.45	18.98
"	"	M. K. & T.	996	2	49.04	52.06	50.30	20.30	19 12	19.78

						h. m.	h. m.	h. m.	Miles	per	Hour.				c.	per	Mile.
Pop. 1,206,000 NEW YORK.....	Washington....	147,000	.....	2?	Av. 228½ 227	6	5.55	8.11	7.19	38.87	27.74	31.26	$7.50	$8 50	$9 50	3.26	3.70	4.13
"	Boston	362,000	*	4	Av. 226½ 213¾	10	6 33	9 43	7.37	35.72	23.67	30.11	5.00	6.00	6.50	2.34	2 81	3.04
"	Halifax	30,000	B.&A.,E.&M.C.,etc	1	961	1	46.48	47.04	46.56	20.53	20.42	20.48	20.75	†26.75	†26 75	2.16	2.78	2.78
"	Montreal	107,000	N.Y.C. & D. & H. C.	1	392	2	14.20	15.25	14.52	27.34	25.43	26.35	11.00	13.00	13.00	2.81	3.32	3.32
"	Chicago	503,000	.....	3	Av. 947⅔ 902	10	29.10	37.55	34.53	32.49	25.34	27 04	20.00	†25.00	†25.00	2.22	2.77	2.77
"	Cincinnati	256,000	.....	3	Av. 798⅔ 757	7	24.30	35.36	29.14	30.90	23.01	27.11	‡18.00	†22.00	†22.00	2.38	2.91	2.91
"	St. Louis.....	350,000	[& P., etc.	4	Av. 1,128½ 1,065	8	35.03	48.35	40.50	31.77	24.15	27.69	24.25	†30.25	†30.25	2.28	2.84	2.84
"	San Francisco..	234,000	via N.Y.C. & C. R. I.	1	3,349	1	162.01	162.19	162.10	20.67	20.63	20.65	135 30	†157 30	†157.30	4.04	4.70	4.70
"	Savannah.....	31,000	via Charleston.....	1	936	2	38.32	47.58	42.06	24.29	19.51	22.23	25.00	†30.00	†30 00	2.67	3.21	3.21
"	New Orleans...	197,000	.....	2	Av. 1,460½ 1,395	3	54.41	60.44	58.42	25.51	22.97	24.51	38.00	†48 00	†48.00	2.72	3.44	3.44
Pop. 503,000 CHICAGO	Montreal	107,000	Grand Trunk.....	1	848	2	32.53	35.07	34.30	25.79	24.15	24.58	15.00	†20.00	†20.00	**1.77**	**2.36**	**2.36**
"	Cincinnati.....	256,000	.....	2	Av. 302 294	3	10.50	13.20	11.56	28.62	22.05	25.54	9.00	10.00	11.00	3.06	3.40	3.74
"	Savannah.....	31,000	Chic. & E. Ill., etc..	1	1,074	2	55.18	59.57	58 06	19.42	17.91	**18.48**	4 days. §31.00	.....	.....	2.89		
"	New Orleans...	197,000	Gt. Jackson Route..	1	915	2	39.14	51.51	46.19	23.32	17.65	19.76	20.00	†27.00	†27.00	2.19	2.95	2.95
"	St. Louis.....	350,000	.....	3	Av. 289 283	6	10.40	12 20	11.27	26.72	23.61	25.25	8.70	.....	.....	3.07		
"	Kansas City....	56,000	.....	3	Av. 501⅔ 487	6	19.20	25 10	22.15	26.45	19.35	22.55	14.90	†17.90	†17.90	3.06	3.68	3.68
"	Omaha.....	31,000	.....	3	Av. 498½ 491	6	21.00	24.00	22.05	23.86	20.46	22.57	16 00 unlimited.	19.00	19.00	3.26	3.87	3.87
Pop. 31,000 OMAHA.....	San Francisco..	234,000	U. P. & Cent. P....	1	1,866	1	97.06	100.09	98.37	**19.22**	18.63	18.92	100.00	†114.00	†114.00	**5.36**	**6.11**	**6.11**
Pop. 256,000 CINCINNATI.....	New Orleans...	197,000	L. & N. R. R.....	1	921	2	34.35	38.50	36 50	26.63	23.72	25.00	20.00	†26.00	†26.00	2.17	2.82	2.82
Pop. 350,000 ST. LOUIS.....	"	197,000	.....	2	Av. 712½ 700	2	34.24	37.36	35.59	20.35	19.28	19.80	‖15.00	†20.00	†20.00	2.14	2.86	2.86
"	Cincinnati.....	256,000	.....	2	Av. 357¼ 340	4	10.10	14.44	12.15	33 44	24 09	28.37	‖10.00	†11.00	†11.00	2 94	3.23	3.23
"	Omaha.....	31,000	W., St. L. & P.....	1	410	2	14 45	20.55	17.37	27.80	19.60	23.26	12.75	†15.25	†15.25	3 11	3.72	3.72
"	Galveston.....	22,000	.....	3	Av. 942 870	4	46.17	52.06	49.58	20.30	**17.27**	19.12	¶28.00	lim'd em'g't 20.50	1st unlimit'd 37.30	3.22	emi't 2.36	4.29

* Also four steamboat lines and trains.
† Palace and sleeping car.
‡ $20 via Erie.
§ 1st unlimited $37.10.
¶ Round trip, $42.00; rate, 2.41c.
‖ Also steamboats.

TABLE XXII.—COMPENDIUM OF GENERAL RESULTS,—Maximum, Minimum, and Average Speeds.

LOCATION.	Number of Routes Examined.	Aggregate Length	Total Number of Trains.	Hours Run.	Aggreg'e Mileage.	Fastest Trips. Hours Run.	Slowest Trips. Hours Run.	Ratio of latter to former. Excess per cent.	Ratio of average highest charge per mile to average lowest ditto. Excess per cent.	*Ratio of average speed (in miles per hour) to average fare (in cents per mile).	Fastest Trip Speeds.			Slowest Trip Speeds.			Average Trip Speeds.		
											Max.	Min.	Average.	Max.	Min.	Average.	Max.	Min.	Average.
		Miles.		h. m.	Miles.	h. m.	h. m.												
England	18	3,557½	152	1,430.32	50,500½	86.00	123.51	44.	91.	11.20	**46.56**	**35.68**	**41.37**	**37.25**	**19.75**	**28.72**	**41.70**	**29.08**	**35.07**
France	15	4,799	67	1,721.50	40,105	160.10	260.23	63.	82.	8.06	39.87	26.09	29.96	22.03	12.38	18.43	30.07	18.27	23.29
North Germany	16	3,466	68	1,029	26,287	104.41	171.31	64.	184.	10.73	**40.28**	28.48	**33.11**	**27.96**	16.47	20.21	**30.61**	**22.60**	**25.53**
South Germany	14	2,742	46	823.09	16,166	123.51	165.12	33.	158.	7.38	28.74	16.70	22.14	21.31	12.44	16.60	22.86	15.84	19.64
All Germany	30	6,208	114	1,852.45	42,453	228.32	336.43	47.	171.	9.20	40.28	16.70	27.16	27.96	12.44	18.44	30.61	15.84	22.91
Austria	13	2,826	35	791.05	15,373	118.55	178.56	50.	161.	6.94	32.49	15.18	23.76	19.86	12.61	15.79	22.76	13.88	19.43
Belgium	7	441	54	252.18	5,834	14.31	23.30	62.	153.	11.68	35.54	28.04	30.38	27 50	16.77	18 72	28.90	20.31	23.12
Holland	5	334	35	174.04	4,345	10.06	16.44	72.	101.	9.08	36.00	**30.18**	33.07	25.95	**17.86**	19.96	29.81	22.19	24.96
Switzerland	11	693½	43	300.31	4,994	35.50	49.02	37.	101.	6.70	25 50	16 06	19.35	16.99	**10.17**	14.14	19.56	14 91	16.62
Russia	5	3,210½	15	915 13	17,435	146.29	189.25	29.	169.	5.81	26.73	20.64	21.92	18.57	15.88	16.95	20.22	18.42	19.05
Turkey	2	729	2	69.10	1,458	34.20	34.50	1½	.....	.....	24.87	14.82	21.23	24 31	14.62	**20.93**	24.59	14.72	21.08
Italy	21	3,318½	79	1,087.19	19,838	138.15	223.04	61.	119.	7 45	29.02	18.00	24 00	24.36	10.75	14.88	24.78	14.71	18.25
Spain	10	2,655½	19	615.38	9,945	137.51	187.51	36.	109.	5.38	23.53	14.23	19.27	20.20	11.05	14.14	20.35	13.15	16.15
Portugal	3	481½	5	119.48	1,711	29.58	38.45	29.	84.	4.81	**17.46**	**13.22**	**16.07**	**14.79**	10.31	**12.43**	**16.09**	**12.82**	**14.28**
New England	17	3,373½	61	679.33	18,252	120.39	145.52	21.	0.	10.62	39.17	19.85	27.96	28.25	18.00	23.13	31.31	19.16	26.86
Middle States	20	3,097	121	1,003.59	29,020	97.53	131.31	34.	0.	10.99	**48.55**	**21.30**	**31.64**	27.51	13.45	**23.55**	**34.23**	**20.72**	**28.90**
Western States	34	10,937	83	2,078.41	51,388	407.56	496.38	22.	0.	8.00	35.89	19.72	26.81	27.95	**18.63**	22.02	29.62	19 18	24 72
Southern States	32	6,729	59	1,143.07	24,590	287.23	344.29	20.	0.	5.49	30.22	14.09	23.41	27.66	9.69	19.53	28.63	11.64	21 51
N. and Northwestern States,	11	3,128	22	560.30	10,532	147.40	189.55	21.	0.	5.28	30.91	16.20	21.18	26.15	**6.66**	17.52	28.14	9 86	18.80
Southwestern States	8	2,220	13	388.28	7,000	113.48	132.05	16.	0.	3.95	**22.71**	16.43	19.51	**22.46**	10.80	16.81	**22.59**	13.17	18.02
Far West	19	6,350	34	1,245.00	20,630	330.15	453.21	37.	0.	2.81	25.11	14.58	**19.23**	23.65	8.89	**14.07**	24.42	13 13	**16.57**
Canada, etc.	15	2,962	32	561.23	12,421	130.01	155.43	20.	0.	7.79	32.00	**10.00**	22.78	**28.98**	9.64	19.02	30.32	**9.82**	22.13
Continental Europe	122	25,696½	468	7,899.41	163,491	1,054.57	1,539.13	46.	134.	7.64	40.28	13.22	24.36	27.96	10.17	16.69	30.61	12.82	20.70
Europe, including England.	140	29,254	620	9,330.13	213,991½	1,140.57	1,663.04	46.	114.	8.37	46.56	13.22	25.64	37.25	10.17	17.59	41.70	12 82	22.94
United States, etc.	156	38,796½	425	7,660.41	173,833	1,635.35	2,049.34	25.	0.	5.99	48.55	10.00	23.72	28.98	6.66	18.93	34.23	9.82	22.69
World	296	68,050½	1045	16,990.54	387,824½	2,776.32	3,712.38	34.	57.	7.60	48.55	10.00	24.51	37 25	6.66	18.33	41.70	9.82	22.81
Europe: Table XX.	23	13,481½	91	3,974.23	91,914	554 50	729.40	31.	130.	7 66	44.11	16.91	24.60	28 35	9.86	18.80	37.46	15.82	23.12
United States: Table XXI.	23	16,348	91	5,027.55	122,228	682.04	807.08	15.	0.	8.44	38.87	19.22	24.01	27.74	17.27	20.84	31 26	18.48	24.31

* Ratio of railway civilization.

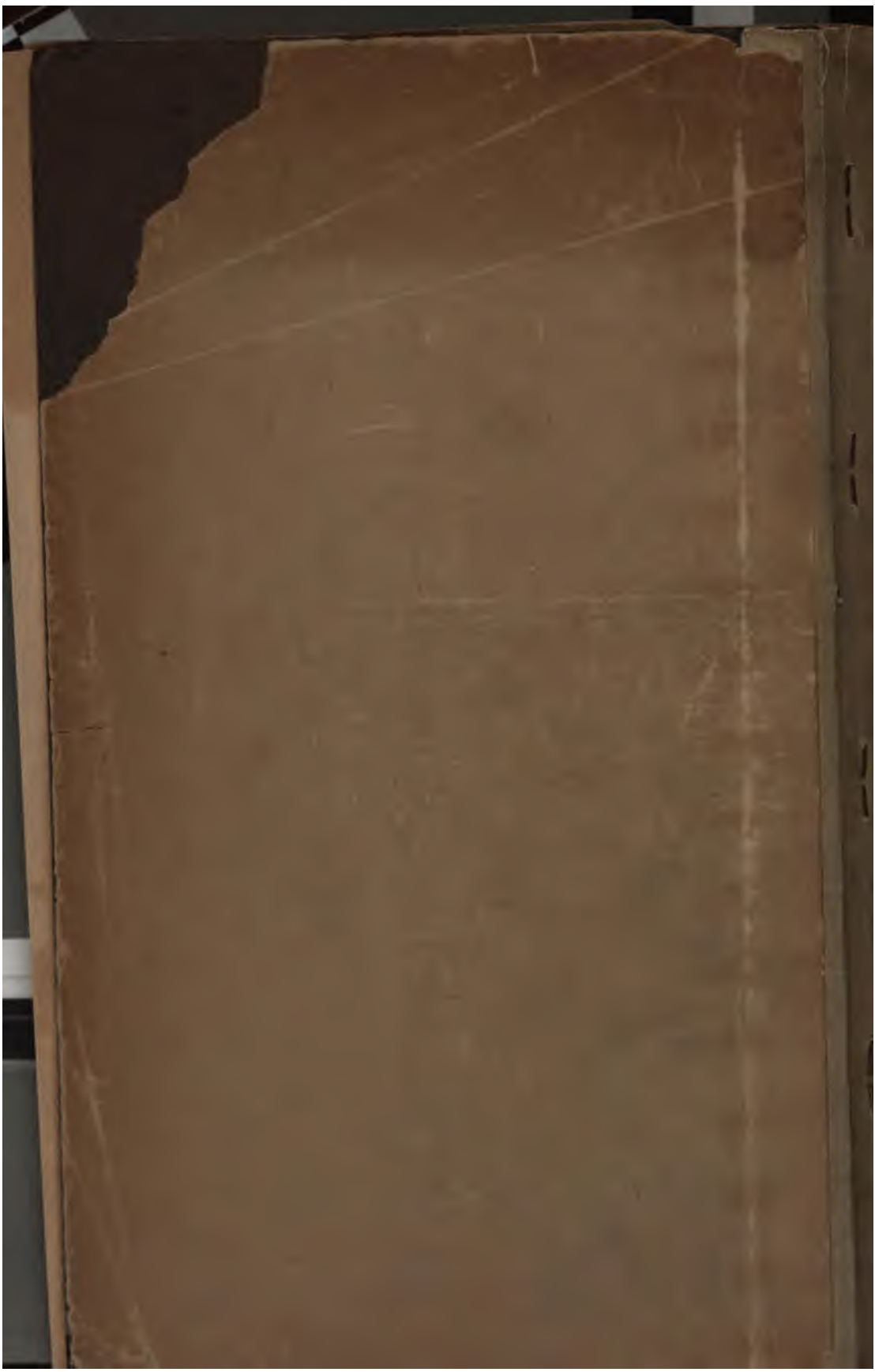
TABLE XXIII.—COMPENDIUM OF GENERAL RESULTS.—SUMS OF DIFFERENT CLASSES OF FARES.

COUNTRY.	Express I.			Ordinary I.			Express II.			Ordinary II.			Express III.			Ordinary III.			IV.			Total.		
	No. of Routes.	Mileage.	Sum of Fares.	Routes.	Miles.	Fares.	Routes.	Miles.	Fares.	Routes.	Miles.	Fares.	Routes.	Miles.	Fares.	Routes.	Miles.	Fares.	Routes.	Miles.	Fares.	Routes.	Miles.	Fares.
England	3	245	$14.14	10	1,631¼	$62.71	3	245	$10.16	10	1,631¼	$47.79	....	.....	.....	10	1,631¼	$33 93	....	.....	.....	10	5,383½	$168.74
France	....	.....	.....	12	3,854	146.84	....	.....	.....	12	3,854	110.22	....	.....	.....	12	3,854	80.55	....	.....	.....	12	11,562	337.61
North Germany	10	1,936	68.31	11	2,103½	64.74	10	1,936	50.79	11	2,103½	49.10	9	1,852	$34.53	11	2,103½	32.89	5	877	$7.00	11	12,911½	307.35
South Germany	6	1,230½	48 64	8	1,618½	52.45	6	1,230½	35 43	8	1,618½	36.73	2	263½	4.78	8	1,618½	23 98	....	.....	.....	8	7,580	202.01
All Germany	16	3,166½	116.94	19	3,722	117.19	16	3,166½	86.22	19	3,722	85.83	11	2,115½	39.32	19	3,722	56.87	5	877	7.00	19	20,491½	509 36
Austria	8	1,683½	68.48	8	1,691	54.58	8	1,683½	50.91	8	1,691	40.38	1	217½	4.22	9	1,865½	29.14	....	.....	.....	9	8,831½	247 71
Belgium	7	441	13.14	7	441	10.43	7	441	9.87	7	441	7.73	7	441	6.44	7	441	5.15	....	.....	.....	7	2,646	52.46
Holland	....	.....	.....	4	282	10.18	....	.....	.....	4	282	8.02	....	.....	.....	4	282	5.08	....	.....	.....	4	846	23 28
Switzerland	....	.....	.....	11	693½	23.44	....	.....	.....	11	693½	16.42	....	.....	.....	11	693½	11.62	....	.....	.....	11	2,080½	51.49
Russia	1	401	21.72	5	3,210½	144.39	1	401	14.81	5	3,210½	106.36	....	.....	.....	5	3,210½	55.01	....	.....	.....	5	10,433½	342.29
Turkey	No	fares	found	in	guide.																			
																			Mixed trains.					
Italy	21	3,110½	112.70	21	3,110½	102.46	21	3,110¼	78.88	21	3,110½	71.70	....	.....	.....	21	3,110½	51.21	21	3,110½	39 97	21	18,663	456.93
Spain	....	.....	.....	10	2,655½	107.22	....	.....	.....	10	2,655½	80.73	....	.....	.....	10	2,655½	51.36	....	.....	.....	10	7,966½	239.31
Portugal	....	.....	.....	3	481½	18.48	....	.....	.....	3	481½	14.30	....	.....	.....	3	481½	10.05	....	.....	.....	3	1,444½	42.83
New England	....	.....	.....	12	2,225½	56 25	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	12	2,225½	56.25
Middle States	....	.....	.....	18	2,964	78.04	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	18	2,964	78.04
Western States	....	.....	.....	24	7,073	218.40	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	24	7,073	218.40
Southern States	....	.....	.....	29	6,293	246.80	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	29	6,293	246.80
N. and N. W. States	....	.....	.....	9	2,634	93.65	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	9	2,634	93.65
S. W. States	....	.....	.....	7	1,875	85.60	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	7	1,875	85.60
Far West	....	.....	.....	17	5,434	320.20	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	17	5,434	320.20
Canada, etc.	....	.....	.....	10	2,194	62.35	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	10	2,194	62.35
Continental Europe	53	8,802½	333.00	100	20,141½	735.21	53	8,802½	240.69	100	20,141½	541.69	19	2,774	49.97	101	20,316	356.03	26	3,987½	46.97	101	84,965	2,303.27
Europe including England	56	9,047½	347.14	110	21,772½	797.92	56	9,047½	250.85	110	21,772½	589.48	19	2,774	49.97	111	21,947½	389.96	26	3,987½	46.97	111	90 348½	2,472.00
United States, etc.	....	.....	.....	126	30,692	1,161.90	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	126	30,692	1,161 90
World	56	9,047½	347.14	236	52,464½	1,959.82	56	9,047½	250.85	110	21,772½	589.48	19	2,774	49.97	111	21,947½	389.96	26	3,987½	46.98	237	121,040½	3,633.90
Europe: Table XX.	11	5,001	204.72	19	12,067	464.54	11	5,001	153.31	20	12,480	351.98	2	12,085	21.45	15	9,396	166.12	....	.....	.....	23	45,155	1,362.13
United States: Table XXI.	....	.....	.....	22	16,348	470.40	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	....	.....	.....	22	16,348	470.40

TABLE XXIV. — Compendium of General Results. Fares — Maximum, Minimum, and Average Rates per Mile.

COUNTRY.	Express I.		Ordinary I.					Express II.		Ordinary II.					Express III.		Ordinary III.					IV, Max.	IV, Min.	IV, Av.	Grand Av.
	Max.	Min.	Max.	Min.	Exp. I, Av.	Ord. I, Av.	Total I, Av.	Max.	Min.	Max.	Min.	Exp. II, Av.	Ord. II, Av.	Total II, Av.	Max.	Min.	Max.	Min.	Exp. III, Av.	Ord. III, Av.	Total III, Av.				
England	**6.34**	5.34	**5.86**	3.15	**5.77**	3.84	4.10	**4.75**	3.74	**4.28**	2.57	**4.15**	2.93	3.09	.....	.....	**2.77**	1.95	.....	2.08	2.08	.....	.....	.....	3.13
France	.....	.....	3.81	3.81	.....	3.81	3.81	.....	.....	2.86	2.86	.....	2.86	2.86	.....	.....	2.09	2.09	.....	**2.09**	**2.09**	.....	.....	.....	2.89
North Germany	3.83	3.41	3.40	2.89	3.53	3.08	3.29	2.83	2.54	2.57	2.22	2.62	2.33	2.47	2.07	1.78	1.82	1.36	1.86	1.56	1.70	0.87	0.76	0.80	2.38
South Germany	4.73	3.50	4.08	3.06	3.95	3.24	3.55	3.53	2.47	2.73	2.02	2.88	2.27	2.53	1.88	1.76	2.07	1.31	1.82	1.48	1.53	.....	.....	.....	2.66
All Germany	4.73	3.41	4.08	2.89	3.69	3.15	3.40	3.53	2.47	2.73	2.02	2.72	2.31	2.50	**2.07**	1.76	2.07	1.31	1.85	1.53	1.65	0.87	**0.76**	0.80	2.49
Austria	4.40	3.76	3.67	3.08	4.07	3.23	3.65	3.23	2.80	2.68	2.23	3.02	2.39	2.71	1.94	1.94	1.72	1.39	**1.94**	1.56	1.60	.....	.....	.....	2.80
Belgium	2.96	**2.96**	2.37	**2.37**	**2.96**	**2.37**	**2.67**	2.19	**2.19**	1.75	**1.75**	**2.19**	**1.75**	**1.97**	1.46	**1.46**	1.17	1.17	**1.46**	**1.17**	**1.32**	.....	.....	.....	**1.98**
Holland	.....	.....	4.53	3.08	.....	3.61	3.61	.....	.....	3.56	2.46	.....	2.84	2.84	.....	.....	2.26	1.57	.....	1.80	1.80	.....	.....	.....	2.75
Switzerland	.....	.....	3.87	3.05	.....	3.38	3.38	.....	.....	2.64	2.16	.....	2.37	2.37	.....	.....	1.93	**1.14**	.....	1.68	1.68	.....	.....	.....	2.48
Russia	**5.42**	5.42	4.68	4.47	5.42	**4.50**	**4.60**	**3.69**	3.69	3.36	3.20	3.69	**3.31**	**3.36**	.....	.....	1.71	1.71	.....	1.71	1.71	.....	.....	.....	**3.28**
Turkey	No fares found in Guide.																					mixed train			
Italy	3.84	3.40	3.49	3.09	3.62	3.29	3.44	2.69	2.38	2.44	2.16	2.54	2.31	**2.43**	.....	.....	1.74	1.54	.....	1.65	1.65	**1.36**	1.20	1.28	2.45
Spain	.....	.....	4.45	3.75	.....	4.04	4.04	.....	.....	3.34	2.52	.....	3.04	3.04	.....	.....	2.07	1.80	.....	1.93	1.93	.....	.....	.....	3.00
Portugal	.....	.....	**4.74**	3.58	.....	3.84	3.84	.....	.....	**3.60**	2.79	.....	2.97	2.97	.....	.....	**2.42**	1.99	.....	2.09	2.09	.....	.....	.....	2.97
New England	.....	.....	3.28	1.77	.....	**2.53**	**2.53**	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	**2.53**
Middle States	.....	.....	3.47	**1.72**	.....	2.63	2.63	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.63
Western States	.....	.....	4.09	2.67	.....	3.09	3.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.09
Southern States	.....	.....	5.23	2.00	.....	3.92	3.92	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.92
N. and Northwestern States	.....	.....	4.00	2.74	.....	3.56	3.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.56
Southwest States	.....	.....	7.20	3.44	.....	4.56	4.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.56
Far West	.....	.....	**8.77**	3.00	.....	**5.89**	**5.89**	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	**5.89**
Canada, etc	.....	.....	3.94	2.17	.....	2.84	2.84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.84
Continental Europe	5.42	2.96	4.74	2.37	3.78	3.65	3.69	3.69	2.19	3.60	1.75	2.73	2.69	2.70	2.07	1.46	2.42	1.14	1.80	1.75	1.76	1.36	0.76	1.18	2.71
Europe including England	6.34	2.96	5.86	2.37	3.84	3.66	3.72	4.75	2.19	4.28	1.75	2.77	2.71	2.72	2.07	1.46	2.77	1.14	1.80	1.78	1.78	1.36	0.76	1.18	2.74
United States, etc	.....	.....	8.77	1.72	.....	3.79	3.79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.79
World	**6.34**	**2.96**	**8.77**	**1.72**	**3.84**	**3.74**	**3.75**	**4.75**	**2.19**	**4.28**	**1.75**	**2.77**	**2.71**	**2.72**	**2.07**	**1.46**	**2.77**	**1.14**	**1.80**	**1.78**	**1.78**	**1.36**	**0.76**	**1.18**	**3.25**
Europe: Table XX	5.42	3.19	4.97	2.95	4.09	3.85	3.92	3.99	1.91	3.65	2.01	3.06	2.82	2.96	1.87	1.76	2.09	1.47	1.78	1.77	1.77	.....	.....	.....	3.02
United States: Table XXI	.....	.....	5.36	1.77	.....	2.88	2.88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.88

NOTE. — Black type figures give the range of maximum, minimum, and average rates on each continent, and also in Europe with England included.

NOTE. — The average parlor car extra charge in the United States is about ½ c. a mile. Sleeping car ditto, 1 c.

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